FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

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IF YOU PROTECT WAR WORKERS

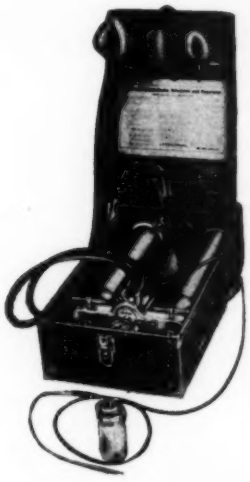
THERE IS ANOTHER REASON FOR THE

EMERSON

RESUSCITATOR

Asphyxia strikes in war plants too—large and small. It can result from all sorts of unexpected and freakish accidents—smoke, electric shock, fumes or even a blow on the head that affects respiration.

When this happens, be prepared with the finest automatic life saving machine available. Have ready an EMERSON RESUSCITATOR. This is your most effective means of standing behind the men who stand behind the guns.



Write for literature or an actual demonstration.

J. H. EMERSON COMPANY

Representatives in Principal Cities

22 COTTAGE PARK AVENUE • CAMBRIDGE, MASS.

Get the PROTECTION you need

FEDERAL Model C-5 COASTER SIREN

full 3-minute roll —coaster brake.

Choice of flashing red light or grille front.

Large size, 16" long, 9" high, weight 25 lbs.

Other models with single or double tone; flashing or motor-driven oscillating red lights; regular or weatherproof design. All precision-machined, with individually balanced rotor, knife-edge ports for true-pitch tone, heavy duty 6 or 12-volt ball bearing motors, sturdy housing and base.

...On your new equipment specify this big FEDERAL COASTER SIREN

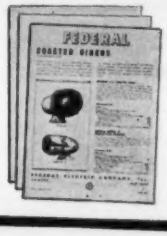
When you order your new equipment, *specify* the siren that will give you maximum protection, absolute dependability. Federal Sirens are designed scientifically to assure a powerful, penetrating tone, and are built for instant starting, dependable, long-life operation, with a minimum of maintenance. Model C-5 Coaster Siren shown above is a big, powerful siren, designed especially for emergency vehicles requiring a deep, powerful warning to assure safety to other vehicles and pedestrians. Get details and prices on this and other Federal Sirens—write for bulletins today.

How Dependability and Power are built into FEDERAL Sirens

Cast aluminum or die-cast zinc alloy rotors, accurately machined and individually balanced. Knife-edge ports assure even cut-off and true pitch for penetrating roaring tone. Thin, smooth rotor blades handle large air volume with minimum current consumption.

Get this Bulletin FREE

Details, illustrations, and prices on this and other Federal vehicle and fire alarm sirens. *Write today.*



FEDERAL ELECTRIC COMPANY, INC.

SIREN HEADQUARTERS

8702 SOUTH STATE STREET, CHICAGO 19, ILLINOIS

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

FIRE ENGINEERING

A Consolidation of Fire and Water Engineering, The Fire Engineer and Fire Protection

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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

Green Light for the Blueshirts!

AFTER over three years of war, with its government restrictions and limitations, the fire service is being given the green light.

● The way is clearing for replacement of old, obsolete apparatus and equipment, out-moded fire houses and fire alarm telegraph headquarters.

● Today millions of dollars are already earmarked, or being set aside by municipalities for this purpose. Programs involving expenditures of still further millions are being drawn.

● Interest in these post-war improvements is attested by the inquiries being received almost daily from FIRE ENGINEERING readers for construction designs and plans of new fire stations and other structures, and for data on modern fire fighting apparatus and equipment.

● In partial answer to these requests we publish the first comprehensive information on fire station design to be compiled since the war began. It will be followed by additional installments on fire alarm buildings, and drill towers.

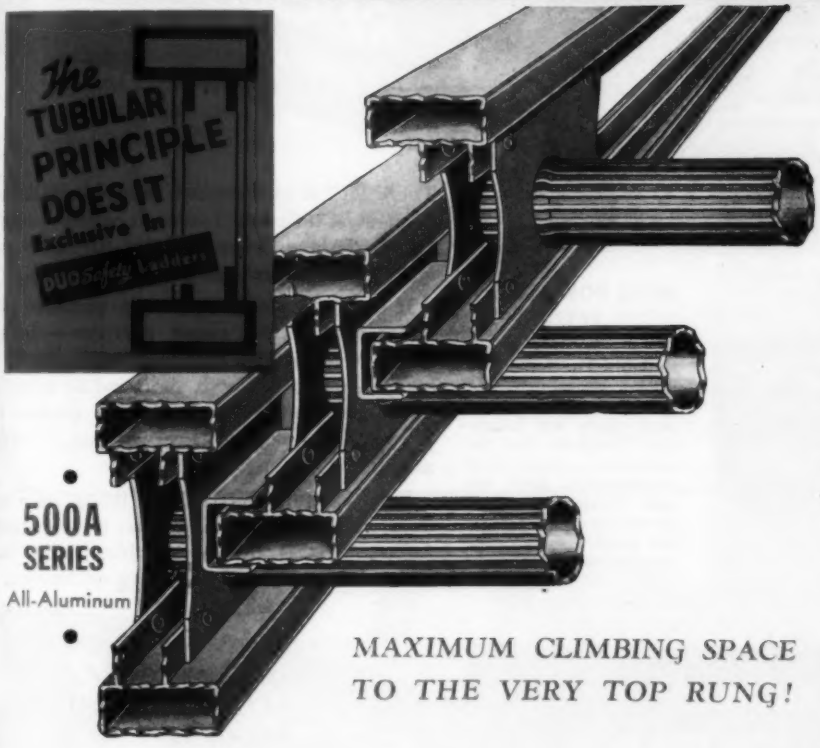
The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price U. S. and Latin America, $2.50 a year; Canada, $3; Foreign, $3.50; Single copies, 25c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1945, by Case-Shepperd-Mann Publishing Corp. President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Advertising Manager, WILLIAM J. GIBSON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 6 No. Michigan Ave., Chicago 2, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U. S. A.

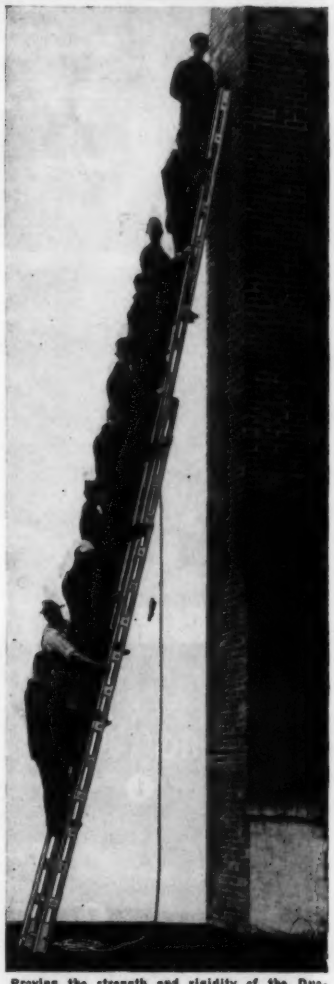
A CASE-SHEPPERD-MANN PUBLICATION
"*Specialized* Leadership"

Tubular STRENGTH



500A SERIES
All-Aluminum

MAXIMUM CLIMBING SPACE TO THE VERY TOP RUNG!



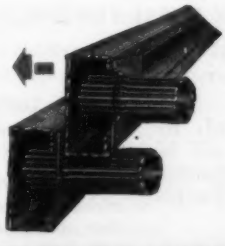
Proving the strength and rigidity of the Duo-Safety Aluminum Ladders. A 2-section bearing the combined weight of 10 men.

Duo-Safety's ALL-ALUMINUM ladders are back again! Here's that unique, space-saving, overlapping Series 500A construction (see cut). It gives maximum climbing space to the very top rung . . . reduces space required for banking which makes the use of shorter wheelbases on service trucks. It does these things without sacrificing strength or light weight. Duo-Safety's exclusive TUBULAR PRINCIPLE does it! This rectangular extruded Duralumin rail, together with other structural refinements, gives the Fire Chief everything he's looking for, and makes Duo-Safety ALL-ALUMINUM a great Ladder hit!

TWO SECTION Series 700 A

SERIES 700A COMPANION EQUIPMENT

This new Duo-Safety channel design is an outstanding development in light-weight pumper ladder equipment. All-aluminum (Duralumin) . . . all-around husky construction gives you faultless quality and positive safety! Designed to replace the bulky old type solid side wood pumper ladders.

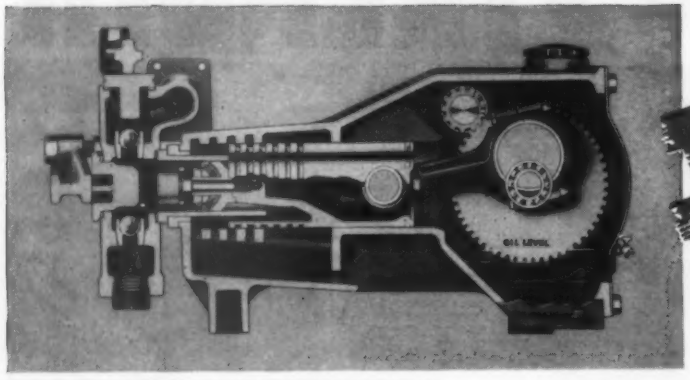


NOTE
NOW IN FULL PRODUCTION ON ALL-ALUMINUM FIRE LADDERS ORDER NOW!

DUO-SAFETY LADDER CORP., OSHKOSH, WIS.

"Use a Good Ladder or Stay on the Ground"

WHY FMC HIGH-PRESSURE FOG

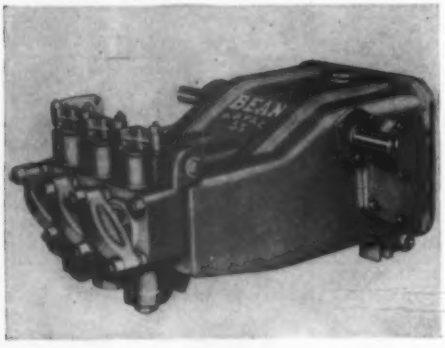


REASON No. 1
THE PUMP AND THE PRESSURE

The FMC High-Pressure Pump — built by Bean — is different from all other pumps and *is designed especially for high-pressure work* by high-pressure pump engineers.

It packs the needed punch to produce and maintain *800 lbs. pump pressure* — better than *600 lbs. nozzle pressure.* Guaranteed for 800 lbs. pump pressure. No need to speed it up to get the necessary pressure! It does its job *easily* — without overworking — with much less horsepower.

This is the pump that is being used on thousands of fire-fighting units of the armed forces. This is the dependable pump that has revolutionized fire-fighting technique.



NOTE HOW STURDY IT IS!

Simple, yet modern in design! The cylinders are porcelain-lined. The gears are helical cut. And there are heavy-duty bearings on the eccentric shaft and countershaft. Both the ball valves and their threadless and gasketless tapered seats are of stainless steel. All working parts are bathed in oil.

REASON No. 2
THE FOG FIRE GUN

THE FMC FOG FIRE GUN—built and patented by Bean—is designed especially for high-pressure fog fire fighting. It cannot be used with a low-pressure system.

This gun is capable of projecting every type of fog formation that may be needed. Everything from a wide fog pattern for close-up work to a long-reaching power stream. On arrival—the fireman has all that he needs to fight the fire.

The high pressure provides a combination of high velocity and finely-atomized water, just what is needed to *blast, cool* and *smother* flame. One gallon of this steam-like water fog, properly used, has fire-quenching possibilities many times that of low-pressure water.

CHECK THESE FEATURES!

1. Protective Spray. Special spray protects face and shoulders from heat.

2. Adjusting Barrel. By turning barrel, flow can be changed from a straight power stream to a close-up fog for any type of fire.

3. Trigger Grip. Gives natural position to arm and grip, and is easy to hold.

4. Gun Lock. Stream can be set in any pattern and locked there if desired.

5. Hose Swivel. Eliminates bothersome twisting of hose. One man can handle gun and hose line.

All of our claims for the effectiveness of high pressure refer only to the FMC System.

BUILDERS OF BEAN HIGH-PRESSURE

KNOCKS DOWN FIRES—FAST

THIS IS WHAT HAPPENS WHEN FMC FOG IS APPLIED TO A FIRE!

1. **Blasting Action.** The FMC High-Pressure Fog forces the flame away from the burning material. Additional fog soon reduces the temperature below the combustion point.

2. **Cooling Action.** The fine fog particles absorb heat more rapidly than ordinary droplets of water. The result? More heat absorption per gallon of water.

3. **Smothering Action.** The steam—created by the fog—soon smothers the flames. There's not enough free oxygen to support combustion.

4. **Penetrating Action.** The high-pressure velocity enables the fog to be blasted through the flame to concealed fires.

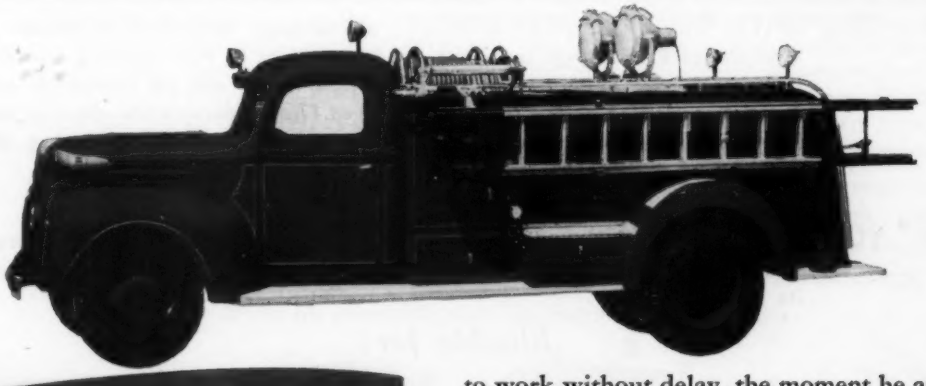
5. **Smoke and Gas Eliminated.** The force of the fog discharge blows the smoke away. The fine particles of fog absorb both smoke and gas.

6. **Minimum Water Damage.** Due to its fineness, speed and heat-absorbing properties, the high-pressure fog is completely used up. Water damage is practically eliminated.

The entire water system is protected against freezing.

WIDE FOG PATTERN AND MIDDLE SETTING

STRAIGHT POWER STREAM



REASON No. 3
THE FOG FIRE FIGHTER

The FMC High-Pressure Fog Fire Fighter carries its own water supply and complete fire fighting equipment. So — the fireman can go to work without delay, the moment he arrives at the fire.

There are two guns of 30 gallons each at 600 lbs. nozzle pressure. The flow of these guns can be adjusted to produce any type of fog formation that may be needed — from a wide fog pattern to a straight power stream.

Investigate! FMC High-Pressure Fog is constantly proving its worth at hundreds of town, rural and airport fires. Write — today — for complete information.

FMC *Original* HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY CORPORATION

JOHN BEAN MFG. CO., 709 HAZEL ST., LANSING 4, MICH. • BEAN-CUTLER DIVISION, 409 JULIAN ST., SAN JOSE, CALIF.

PUMPS FOR OVER SIXTY YEARS

Every Man Owes Some Service to His Profession and His Community

MEMBERSHIP

in the

INTERNATIONAL ASSOCIATION OF FIRE CHIEFS

Will afford YOU the opportunity to render it

- YOU OWE IT TO YOURSELF **to keep posted on new developments in the field by acquiring the technical information and other valuable data supplied *only* by the Association.**

  Become a member of the Association which alone—and in your interest—is fighting for the advancement of the Fire Service.

★

- YOU WILL RECEIVE ANNUALLY **a 240-page Technical Handbook of Conference Proceedings including the latest ideas in Fire Fighting and Fire Prevention—24 Bulletins on fire protection topics and all Pamphlets and Regulations issued by the National Board of Fire Underwriters—Special bulletins on Legislation, Fire Protection and other matters affecting the interests of the Fire Service.**

- YOUR MEMBERSHIP **will increase the prestige of the I.A.F.C.—the recognized Voice of the Fire Service—JOIN NOW, and add your efforts towards its success.**

Eligible for:

ACTIVE MEMBERSHIP

Municipal Fire Chiefs; Chiefs of Insurance Patrols; Industrial Fire Chiefs; State and Provincial Fire Marshals

ASSOCIATE MEMBERSHIP

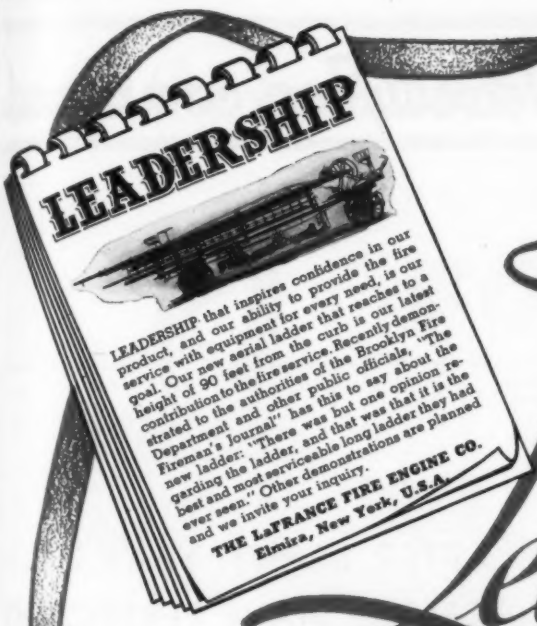
Assistant Chiefs and all other Members of Fire Departments
Any City Official
Representatives of Firms and Corporations interested in fire protection
Individuals interested in fire extinguishment and fire prevention

Application Blanks may be obtained from any Active Member — or write

Fred Shepperd, Engineer-Manager, International Association of Fire Chiefs
24 West 40th Street, New York 18, New York

This Space Donated by

BI-LATERAL FIRE HOSE COMPANY
20 NO. WACKER DRIVE
CHICAGO, ILLINOIS


LEADERSHIP
LEADERSHIP that inspires confidence in our product, and our ability to provide the fire service with equipment for every need, is our goal. Our new aerial ladder that reaches to a height of 90 feet from the curb is our latest contribution to the fire service. Recently demonstrated to the authorities of the Brooklyn Fire Department and other public officials, "The Fireman's Journal" has this to say about the new ladder: "There was but one opinion regarding the ladder, and that was that it is the best and most serviceable long ladder they had ever seen." Other demonstrations are planned and we invite your inquiry.
THE LaFRANCE FIRE ENGINE CO.
Elmira, New York, U.S.A.

Leadership

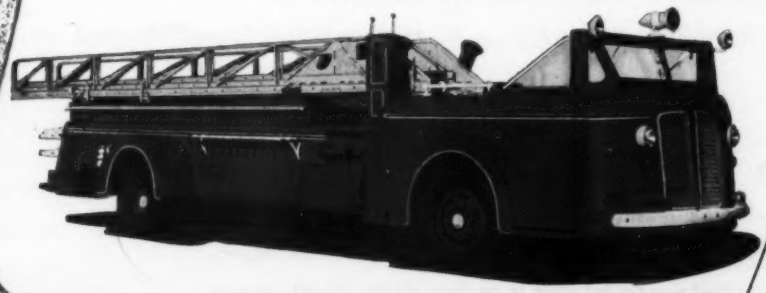
AMERICAN LA FRANCE FOAMITE

today carries a greater responsibility to the fire service than required 75 years ago when the above pictured aerial truck was built. Since that time refinement and improvement in aerial ladder and truck design has been almost continuous to meet the changing needs of the fire service. American LaFrance is building the most complete line of modern aerial ladder trucks for the fire service. Four wheel and tractor drawn types are available to meet every need. The line of 4-wheel aerials is complete with aerial ladders available in lengths of 65 feet, 75 feet, 85 feet or 100 feet. All models are amply powered for road performance in keeping with modern traffic requirements.

The all-steel aerial ladder is one man operated with hydraulic power. The entire ladder is constructed of high tensile strength, corrosion resisting U.S.S. Cor-ten steel, and is the strongest aerial ladder ever offered to the fire service. Every safety feature essential to the control and operation of the aerial ladder is built into the structure. The highly maneuverable, compact yet accessible design of the 4-wheel aerial is finding increasing favor of the fire service for such reasons as:

LOWER COST **BETTER DRIVER VISION**
SHORTER LENGTH **EQUAL UTILITY**
LIGHTER WEIGHT **GREATER STABILITY**
BETTER ROAD PERFORMANCE

Write for complete data on these modern aerials.



Recent deliveries of these 4-wheel aerials have been made to:
Ithaca, New York
Hudson, Mass.
Eureka, Calif.
Houston, Texas
Lincoln, Nebr.

AMERICAN-LAFRANCE-FOAMITE CORPORATION
ELMIRA, NEW YORK, U. S. A.
LAFRANCE FIRE ENGINE-FOAMITE LIMITED
TORONTO, 9, ONTARIO, CANADA

now—Selective High Velocity Fog combined wit

Finally AFTER MANY YEARS OF RESEARCH WE HAVE PERFECTED A **FOGNOZL*** THE NEW SERIES 4 NAP—WHICH POSSESSES THESE OUTSTANDING FEATURES—

1. Adjustable tip for varying quantity of Fog (water delivery).

2. Fog volume easily adjusted under full working pressures.

3. Production of true fog of uniform size of water particles at all adjustments.

4. Solid, homogeneous mass of fog produced at all adjustments.

5. High velocity fog tip is removable allowing instant insertion of Fognozl* Extension Applicator.

6. Highly efficient Fognozl*-designed straight streams included.

7. Shut-off, fog and straight stream are instantly available by means of the famous Fognozl* floating gland rotary valve operated by *one* valve handle. It is important that you do not have to go through the straight stream to get the fog.

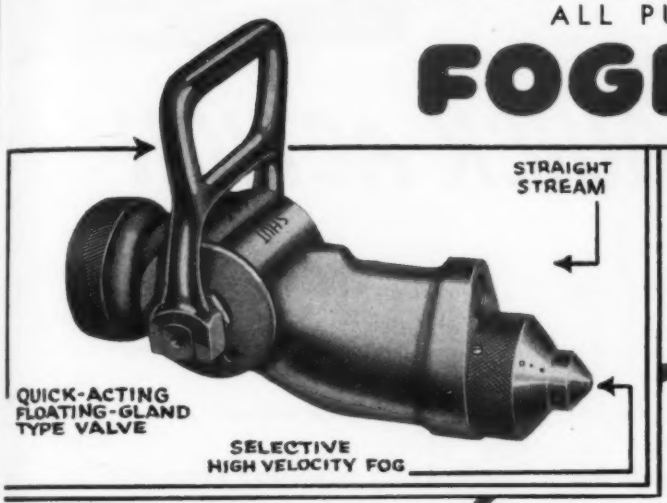
GRISWOLD ORIGINAL — ALL PURPOSE

FOGNOZL

with the famous ALL-PURPOSE FOGNOZL ★

GRISWOLD-ORIGINAL
ALL PURPOSE

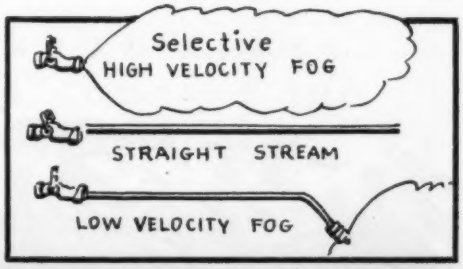
FOGNOZL ★



This NEW SERIES–
4 NAP FOGNOZL ★

Marks such a radical improvement in fire fighting efficiency, personnel protection and conservation of water that we offer this new line of equipment with much "PRIDE BASED UPON PERFORMANCE."

WRITE NOW FOR FURTHER INFORMATION WITHOUT OBLIGATION



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FOG NOZZLE COMPANY

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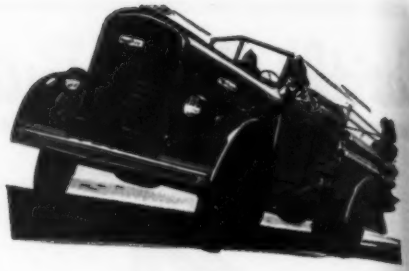
FOG NOZZLE OF CANADA, LTD., MONTREAL, CANADA

"QUICK BURNERS"



REQUIRE QUICK ACTION

Every other minute of the day and night, a residence catches fire in the United States. This, in itself, is startling. But sometimes the original fire jumps to adjoining houses and quickly reaches tremendous proportions.

No city is free from this ever-present threat and in order to combat such outbreaks efficiently, the fire-fighting apparatus must be of the best. Slow and unweildy trucks mean costly delay in answering an alarm when *every* minute counts.

Ward LaFrance trucks are in great demand by fire departments . . . because of their exceptional maneuverability and dependability. Also, the powerful 6 cylinder engine assures speed and plenty of reserve power. If you are planning the purchase of new apparatus, consider the many advanced features offered in a Ward LaFrance . . . Descriptive literature will be sent upon request.

WARD LAFRANCE
TRUCK DIVISION
GREAT AMERICAN INDUSTRIES, INC.
ELMIRA, GAI NEW YORK

AKRON UNIVERSAL SPANNER WRENCHES

OFFERED in a large variety of styles, Akron Spanner Wrenches provide some of the handiest, most efficient tools carried on fire apparatus. Universal Spanners give you the advantage of fitting all sizes of couplings in Pin Lug, Rocker Lug, Roll Pin, Navy Slot and other types.

The Akron line contains nearly 20 different types of Spanner Wrenches some of which are Combined Spanners, Ladder Hooks and Hydrant Wrenches. They serve you handily in many ways and save precious time.

AKRON BRASS MFG. COMPANY, INC.
WOOSTER, OHIO

AKRON BRASS
FIRE FIGHTING EQUIPMENT

TODAY... *gunners stake their lives on this*

Truly a life preserver in the stratosphere! The Scott Portable Oxygen Supply, often called a "walk around bottle", enables gunners and other crew members to disengage their masks from the main oxygen line and move about the ship for regular duties. It also provides requisite breathing-oxygen when the main supply is destroyed in combat.

Scott Air-Pak
BREATHING EQUIPMENT

TOMORROW... *Industry Will Win New Safety*

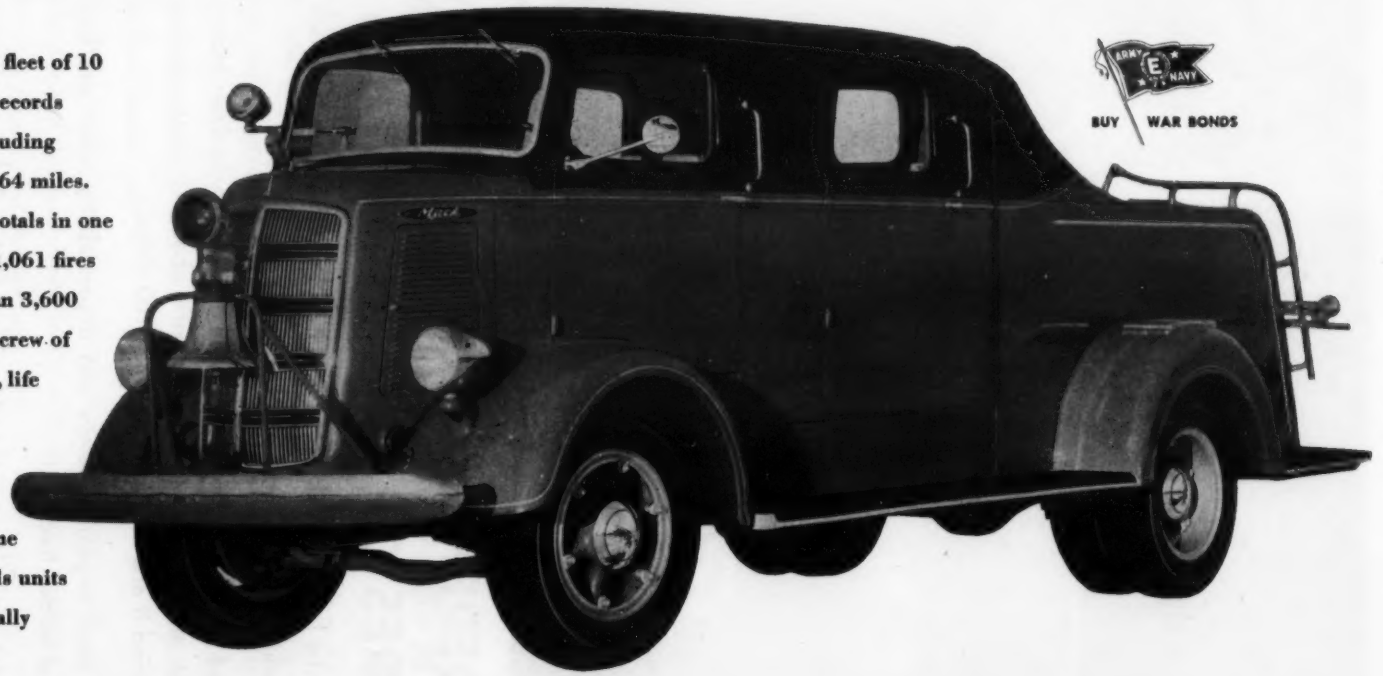
● Yes, out of the wartime welter will emerge many constructive new methods for protecting human life. Among them will be Scott Air-Pak Equipment for industrial service. Backed by the experience of Scott engineers in developing breathing equipment for combat service, tomorrow's Scott Air-Pak will play a new role: providing respiration insurance for workers in mines, for firemen in smoke choked buildings, for maintenance men in gas storage tanks—to name just a few of the many potential applications. Soon—very soon we hope—Scott Air-Pak Equipment will return to peacetime activities!

●With complete comfort and peace of mind, maintenance workers equipped with Scott Air-Pak will *safely* work in the deadliest of fumes.

SAFETY APPLIANCE DIVISION
Scott
AVIATION CORPORATION
LANCASTER, N. Y., U. S. A.

11,061 Fires...can you top this?

11,061 Fires...can you top this?



ARMY-NAVY "E" — BUY WAR BONDS

This Chicago Fire Department fleet of 10 squad wagons has set a lot of records in the past twelve months, including 17,237 runs for a total of 60,964 miles. While achieving these record totals in one year the apparatus attended 11,061 fires and worked a total of more than 3,600 hours. Each big unit carries a crew of 7 men in its cab, plus first aid, life saving and entry equipment, and a turret nozzle capable of shooting 1,000 gallons of water a minute. Such extreme service the year round demands units that have extra stamina. Naturally —*they're Macks!*

If your community needs additional fire-fighting equipment or replacements, think of Mack. Remember, Mack Fire Apparatus is backed by the greatest engineering resources in the industry.

PERFORMANCE COUNTS!

Mack
FIRE APPARATUS

MACK MANUFACTURING CORPORATION, FIRE ENGINE DIVISION,
EMPIRE STATE BUILDING, NEW YORK 1, N. Y.

It will help you if you will mention FIRE ENGINEERING *when writing advertisers*

SAFETY and DEPENDABILITY ARE REGULAR FEATURES OF PIRSCH AERIALS

The Pirsch Aerial Ladder Truck "Tops Them All" in design, performance and dependability combined with safety.

It is equipped with the Pirsch Patented Hydro-Mechanical Hoist; America's first all powered aerial hoist with about 15 years service experience behind it and used by more than 100 cities.

Consider the facts regarding safety and dependability when you buy your next aerial ladder truck.

The Pirsch 65′ Intermediate Aerial Ladder Truck featured above has been delivered to City of Milwaukee, Wisconsin.

"BUILDERS OF AMERICA'S FIRST ALL-POWERED AERIAL LADDER TRUCK AND AMERICA'S FIRST 100′ AERIAL LADDER"

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

CLAMP A QUICK STRANGLE-HOLD ON FIRE

● Choking incipient flammable liquid fires is a simple job — for the Kidde portable extinguisher. Ordinary water-type extinguishers can't control these tough Class B blazes—or the equally tough Class C fires that start in electrical equipment. But Kidde equipment kills them—*and kills them fast*—by smothering them with carbon dioxide gas.

This dry, inert, non-toxic gas swiftly ends blazes, with no contamination of fluids, no harm to valuable mixes or equipment, no after-fire mess to be cleaned up.

For fire safety, call in a Kidde representative—he'll be glad to discuss your fire protection problems. Check the accompanying list of typical industrial hazard areas. One may apply to you.

Kidde Kills Tough Fires

PROCESS ROOMS
OVENS
SPREADERS
MOTORS
STORAGE ROOMS
MIXERS
COATERS
TRANSFORMERS
DIP TANKS
AGITATORS
WASHING TRAYS
CONTROL PANELS

K Kidde

The word "Kidde" and the Kidde seal are trade-marks of Walter Kidde & Company, Inc.

Walter Kidde & Company, Inc. • 140 Cedar Street • New York 6, N. Y.

It will help you if you will mention FIRE ENGINEERING *when writing advertisers*

Inadequate fire defense is indicated when a citizen must traverse a greater distance to send an alarm than is required by the recognized standard of box distribution.

ECONOMY, implying the elimination of waste, especially Fire Waste, to the end that the cost of winning the war may be quickly amortized—or a continuation of the ineptitude in planning which in the 21 peacetime years, 1919-1939, imposed a national burden of 8½ billions of dollars in direct property losses, three times that amount in indirect losses, and more than 200,000 human lives?

Continuation of such losses will add heavily to the burden of reconstruction and delay in planning to strengthen your fire defenses may seriously handicap your efforts to reduce fire losses. Your plans should not only be adequate—to be effective they must be included in the municipal program of post-war improvements.

Fire alarm, a vitally essential factor in the fire defenses is our specialty, and our experience in this field accumulated over a period of 75 years is freely at the disposal of every Fire Chief.

THE GAMEWELL COMPANY
Newton Upper Falls, Massachusetts

FIRE ENGINEERING

JUNE, 1945 VOL. 98. NO. 6

With the Editor

Here's Room for That Post-War Reconversion! In the post-war effort to create work and jobs extensive public works programs will be developed. It is logical to assume that the fire service will receive serious consideration.

It doesn't matter where the money is to come from—federal, state or municipality —the point is that there is plenty of room in this field to spend it wisely and in such a way that it will produce a very definite return on investment, not only to take up the post-war economic slack but as a means of lowering our very serious fire losses for years to come.

Fire chiefs and those responsible for the fire service should bear this in mind: that the majority of present municipal fire stations are architecturally and in other ways totally unsuited for the part they must play in modern fire fighting strategy and methods. A large percentage of them have seen no improvements other than the most elemental, necessary, repairs since they were erected back in the days of horse-drawn apparatus. Many still smell of the horse stalls! True, some stations may have had their faces lifted architecturally, but within, they are still deplorable, with large, open, draughty spaces; steep stairways; dim corridors; ancient lighting fixtures, heating, plumbing and ventilating systems; poor arrangement of watch desk, office and sliding poles; no kitchen, or the poorest of substitutes for one; unsanitary lockers, bathing and washing facilities and other drawbacks too numerous to mention.

Why is it that although some progress has been made to improve working conditions among the personnel—such as more shifts and shorter work hours, and in the purchase of modern apparatus and equipment—so very little has been done to better the surroundings, the "official homes" in which the firemen must spend their business existence?

That some fire chiefs are aware of this condition and are bending every effort to remedy the evil is attested by the many inquiries coming to us from the service, asking for fire station designs, plans and pictures.

Unfortunately there has been little comprehensive material available for these progressively-minded chiefs since the war began. Few architects have specialized in construction for the fire service. That may be why so many of even the more recent fire stations lack the comforts, the time-saving and labor-saving features to be found in in other houses where architects and fire chiefs have cooperated to combine utility with beauty.

In this issue FIRE ENGINEERING presents the first installment of a series of articles prepared to help overcome this dearth of data. To the many fire chiefs, architects, government agencies and others who have cooperated in this endeavor, our sincere thanks.

I.A.F.C. Conference Cancelled Because of the refusal of the War Committee on Conventions to grant the International Association of Fire Chiefs a permit for a conference this year, the 1945 meeting has been cancelled.

Transportation difficulty, which will be greatly aggravated by the rapidly increasing movement of troops from Europe to the Paific, is the factor principally responsible for the denial of permit.

Fred Shepperd

Fire Fighting on Guadalcanal

By SGT. MORRIS HEITOWIT*

MUCH has been written regarding the multitude of problems facing the Army and Navy in planning an invasion and setting up a base. A bustling community, in fact a medium sized city must be developed almost overnight. This task is tremendous, particularly in the Pacific, because the primitive islands have absolutely no facilities to offer, just a few grass huts used by the natives. To protect the vast quantities of supplies, a great deal of which are highly inflammable, a fire department must be organized at once.

The Guadacanal Fire Department organization is one example of how the Army and Navy has taken care of this matter and should prove of interest to firefighters in departments which have been brought to a high state of efficiency over a period of many years. Just as no two cities are alike, so also each island presents special problems. This article is written to explain the setup on Guadalcanal.

Scope of Protection

The broad outline covered the following points: fire prevention rules and regulations, local or unit fire protection, obtaining and improvising fire apparatus, installing an adequate fire alarm system and developing water supply for this purpose.

Supply depots, dumps, piers, open storage areas, fuel dispensing stations, mess halls and barracks are inspected for compliance with fire regulations.

When available, chemical extinguishers have been installed wherever necessary but the most effective and universal local method of "first aid" has been the old fashioned bucket brigade. One 50 gal. oil drum with top removed and two 2 gal. buckets hanging on it is required for each 1,000 sq. feet of building space and similar drums are spaced at 100 ft. intervals throughout open storage areas. These bucket brigades have put out fires in a majority of cases with a minimum amount of damage.

The total amount of apparatus on island and the damages caused by fire are necessarily military secrets. However a description of the types employed and kinds of fires can be be given. Each station is equipped with a crash truck, hose wagon and a trailer pump and, in addition, several water tank trucks are located at various fire stations. The crash trucks all carry booster tanks of at least 300 gal. capacity. The hose wagons are Dodge 6x6 personnel carriers and carry 1,200 feet of 2½" and 400 feet of 1½" hose. The trailer pumps are made by Chrysler, the same model used by the OCD. The water tank trucks carry 700 gallons and have a small pump for filling, capable of 55 gpm at about 251 lbs. pressure.

Connections and valves have been placed on both sides and rear of these trucks to which hard suctions of trailer pumps or crash trucks may be attached, hence vehicle is in effect a portable hydrant. As a large percentage of units on island must haul water for drinking and cooking from distribution points, there are many vehicles available, ranging in capacity from 500 to 1,200 gallons. Location of all these unit vehicles are recorded at Fire Headquarters and tanks are never parked empty.

Improvised Fireboat

Though a fireboat would seldom, if ever, be required, the possibility of a ship or pier fire has not been overlooked. The following arrangements have been made to combat that type of blaze. The hose wagon and trailer pump from the nearest fire house would be driven to the bench at Navy boat pool and immediately onto an LCM (Landing Craft Mechanized) by means of ramp on boat. While craft proceeds to fire, suction hose is set to drop over side, 2 lines of hose are attacked to pump, which is started and then ready to fight fire. Nozzles, fittings and all necessary equipment are on the hose wagon, hence the boat is equal to a fireboat and in event of a large blaze, many of these boats could be placed in operation quickly. Actual tests showed that improvised fireboat could be underway to fire in four minutes or less.

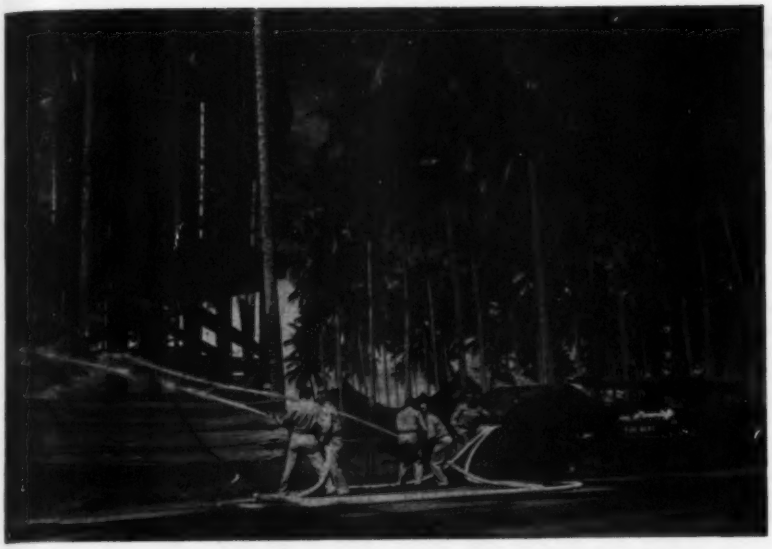
The problem of developing quickly a water supply system for fire fighting and with a minimum amount of materials available was coped with by preparing pumping positions on banks of streams and along beach front, in addition to installing improvised hydrant connections whenever possible. Most of the many rivers and lagoons on the island were inaccessible due to dense brush and marshy or high banks. Lanes were cleared by bulldozers and gravelled to afford a firm footing for trucks and pumps to get to waters' edge quickly and wherever possible, lanes were cut thru high banks to reduce height of suction.

At all the numerous deep wells on island, 15,000 and 25,000 gallon elevated wood stave tanks have been erected for storage. Hydrant connec-

The Making of a Fireboat at Guadalcanal

Upper: Pumper is driven onto tank lighter (LCM). Ramp of craft is lowered to provide runway.
Lower: Pumper suction is lowered overboard, the pump started, and the improvised fireboat is ready for work.

*Chief Fire Alarm Dispatcher, Guadalcanal Fire Dept., Author of Heitowit Firemen's Manual for the New York Fire Department.



Elevated Storage Tanks Feed Water Mains from Which Pumpers Receive Their Supply. Here a Four-Wheel Trailer Pump Is Performing.

tions have been installed on risers to tanks to make this water instantly available and the deep well pumps are immediately started to keep the tanks full, whenever a fire occurs. As conditions improve on the island, pipe lines are being installed in large installations with hydrants dispersed thru the areas.

A big problem was the development of an adequate alarm system without the use of any additional material or equipment. At first a person, in order to report a fire, had to call the nearest firehouse, and give the name of his unit, its location and directions how to get there. This resulted in a great loss of time due to lengthy conversations. Due to excitement, inaccurate and even totally incorrect locations were often reported with the result that fire apparatus could not find the fire.

When the author was placed in charge of the Fire Alarm Bureau, a "phanton box" alarm system was introduced. Each unit area, depot, dump, pier, hospital or other installation was assigned a number, which was posted at each telephone in the area on an appropriately worded card. All these numbers were then plotted on large maps of the island and copies of this master chart were hung in Fire Headquarters and all firehouses. In addition to the maps, sets of assignment cards are kept up to date, limiting on each card, the box number, name of unit, type of installation, phone number, location, route, companies due on 1st, 2nd and 3rd alarms, availability of water, hydrant systems and any other pertinent data. The firemen in each company are required to keep this data up to date by regular reconnaissance for all installations to which their apparatus is first due. Information gained is recorded on all sets of cards.

All fire calls go to Fire Headquarters and the dispatcher there, by means of a switchboard linking all the stations, sends out apparatus designated on assignment cards. Fire calls are given highest priority by all telephone operators. Apparatus is usually on the way in less than one minute after the original call. All units have been told to post a guide on main road near their area to direct incoming apparatus. In the event of breakdown of the Fire Headquarters switchboard, the dispatcher can reach any firehouse by unlisted telephones.

Due to the continuous humid weather, fire hose tends to mildew and rot rapidly, hence a drying tower was constructed at fire headquarters.

Regular inspections to eliminate fire hazards, recommendations for fire prevention and consultations on proposed construction for fire safety have decreased the number of fires which would normally occur and the increased efficiency of the fire fighting forces has saved much valuable and critical government property.

DO NOT REMOVE FROM THIS LOCATION

IN CASE OF

FIRE

TELEPHONE

HENDERSON 100

"FIRE AT BOX

"

No._____

A GUIDE TO DIRECT-FIRE TRUCK SHOULD STAND BY

Card Used to Locate Phantom Box

F.C.C. Assigns Radio Channels

The Federal Communications Commission has announced final allocations of radio frequencies between twenty-five and 30,000 megacycles with the exception of the range between forty-four and 108 megacycles, which are involved in a controversy over FM.

The fire service was allocated a total of 39 clear channels in the radio spectrum, as follows:

15 channels in the 30 to 40 megacycle band.

12 channels in the 104 to 108 megacycle band.

12 channels in the 152 to 162 megacycle band.

The latter 24 channels to have a band width of 60 kc.

Channels in the 940 to 960 megacycle band will also be used for low power fixed point-to-point stations, control circuits, fixed facsimile circuits, etc.

The FCC's ruling now places the fire service on an equal basis with the other emergency services in the operation and use of its own radio communications facilities.

Much work remains to be done in the development of suitable "standards of good engineering practice" under which the growth of radio communication facilities in the emergency services will follow a logical and efficient engineering pattern to make fullest use of the channel space allocated. The International Association of Fire Chiefs has assured the Federal Communications Commission of its fullest cooperation and its Committee on Communications, Chief Roi B. Woolley, Chairman, has been instructed by President Samuel J. Pope to work with the International Municipal Signal Association's radio committee, and with Panel 13 of the Radio Technical Planning Board, Mr. D. E. Noble, Chairman, in the setting up of operational standards to establish rules and regulations for the most efficient use of air time

Detroit Regulates Circuses

Three ordinances relating to the supervision of places of public assemblage have been adopted by Detroit, Michigan, largely as a result of the Hartford circus fire.

One authorizes the building commissioner, health commissioner, and fire marshal to assign for duty at such places men and equipment of their respective departments whenever necessary and to charge the cost of such service to the licensee, owner, or operator. Under this ordinance a circus which exhibited for 14 days paid $912 for services of fire inspectors, fire fighters and equipment, and the city in February was in the process of collecting a bill for $622 covering health and sanitary inspections at the circus.

Licenses or permits for places of public assemblage are issued contingent upon the prompt payment of such fee.

Another ordinance requires the licensee to carry insurance in the amount of $100,000 to guarantee payment of judgments for death or injury to persons or damage to property.

The third ordinance sets forth a schedule of fees for circuses based on price of admission charge but this ordinance is now being changed to base the fee on seating capacity.

Fire Station Design—Tomorrow

A Review of Trends to be Considered in Planning of Post-War Fire Stations

By ROI B. WOOLLEY
Assistant Editor

PUBLIC works construction will play a great part in the nation's post-war reconversion and rehabilitation plans.

Building of fire stations, fire alarm telegraph headquarters, drill towers, shops and other structures practically ceased on December 7, 1941. Even repairs of old structures were limited to barest essentials. There is a very urgent and growing need for rebuilding and repair of existing structures, and erection of new buildings in this field.

The fire service, therefore, should prove a fertile field of endeavor for post-war economic development. Studies by FIRE ENGINEERING* disclose hundreds of fire stations and other buildings are planned or under contemplation as part of post-war building programs. Even though there is at present no assurance of any government financial support, many millions of dollars are already earmarked by municipalities for construction and other improvements in the fire service. It is evident that as rapidly as materials and equipment are made available, building programs will get under way.

All this is evidenced in the letters coming to FIRE ENGINEERING from every part of the country; from cities, towns, villages suburban and rural areas, asking for designs and plans of fire stations and halls, fire alarm buildings, drill towers and the like.

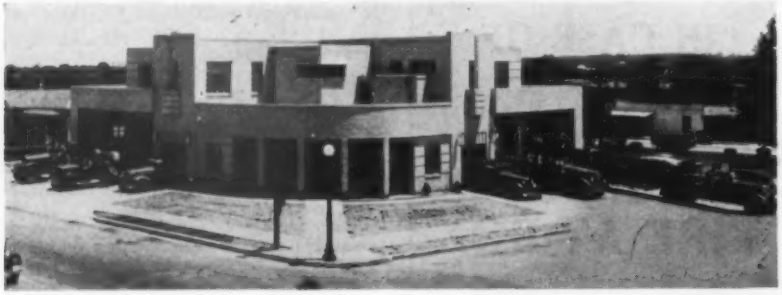
Unfortunately, there are little available data for the planners and builders of such fire service structures. With the possible exception of government-financed, wartime construction, practically no forward progress has been made in the service in over four years. It is difficult, therefore, to anticipate, or prophesy the improvements and changes that will be made in tomorrow's fire stations and other structures.

Editors are not seers. Nor are they infallible. They do not profess to know more about architecture than the professional architect, or more about building fire stations than the professional fire chief and builder. They are, however, in a unique position to observe and gather the ideas of many architects, many fire chiefs and others concerned with the problem from coast to coast, and to translate those ideas and opinions into something definite—usable, workable ideas the fire service can apply to its requirements. That is what they have tried to do here.

The editors of FIRE ENGINEERING hope you will like this fire service construction review. They suggest you keep it at your elbow and consult it when you contemplate your post-war construction program.

Regrettably, wartime publishing limitations prevent the entire subject being contained in this June issue. Therefore, this installment is of necessity limited to the design and construction of *fire stations* only. It is expected that later installments will cover the details of fire alarm telegraph bureaus and drill towers.

*Published in August, 1944, issue.



Austin, Tex., Central Station Has Three Driveways on Three Streets, Houses Six Pieces of Apparatus. Upstairs Dormitory and Sun Deck.

Modernistic Fire Headquarters Building, Des Moines, Ia. Note 2-Way Exit and Extensive Use of Glass, Giving Ample Light.

"Fire Station," Elastic Term

The term "fire station" may cover many types of structures in or related to the fire service, from a makeshift shed at the rural crossroads or temporary industrial war plant, sheltering the crudest of fire appliances, to a block-large municipal fire headquarters housing several fire companies, perhaps a dozen pieces of apparatus and a hundred or more men. It may apply to a "town hall" or "meeting place" or even a garage wherein is housed the community's fire truck or it may be a huge civic center in which the fire department is only a unit.

Obviously there is not room in the limited space at our disposal to include plans, pictures and descriptions of all these different types and kinds of "fire stations"; therefore, to make our message of greatest value to the majority, we must cover the type of fire station the majority are interested in, i.e.: the municipal fire station.

For convenience, and necessity, we have treated the subject under two general classifications: (1) a condensation of the more important fundamentals, such as location, etc., that enter into the planning and creation of any fire station, and (2) actual illustrations.

LOCATION

Influences fire station design

Factors which relate to the location of a fire station and, consequentially, its design, are:

The area to be protected; geographical and topographical relation of the station to other stations in district or area. Grade; soil; drainage.

Type of fire company or companies: whether engine, hook and ladder, rescue, etc; number and type of apparatus or vehicles to be quartered (anticipating future additions).

The station site or plot: its size and shape: situated at corner, mid-block or in park; flush with street or set-back.

Whether situated in industrial, commercial, residential or suburban (or rural) section; congested and built-up or open, zoned or unrestricted area. Proximity of hospitals, institutions, schools, factories or places of public assembly.

Width of thoroughfare to accommodate movements of present and possibly future apparatus.

LANDSCAPING

Can dress up the station

Landscaping, where location and type of station permit, will provide beauty and utility. It should be adapted to station design, layout and surroundings.

WATCH OR CONTROL ROOM

Not a "desk" but an "office"

The nerve center of the fire station is the watch, or control room, where supervision is maintained over all communications, movements of the company, in and out of quarters; contacts with visitors and the keeping of certain records.

The old fashioned "watch desk" located on the apparatus floor has given place to a separate room or alcove in which are centered all essential fire department communication and alarm facilities. Preferably, this is insulated against outside noises, drafts or movements of apparatus, yet the watch officer can at all times observe the front of the apparatus floor and entrance doors.

If necessary to maintain the watch desk on the apparatus floor, it should be enclosed in glass, plexiglass or other vision-free, shatterproof glass or material. It should be sound-proofed and heated and the floor raised at least six inches above the apparatus floor level.

Arrangement of assignment and bulletin boards, bells, annunciators and other signaling and alarm devices should be compact and orderly. With the push-buttons, switches and controls of automatic lighting and devices, they should be concealed from view yet be within each reach of the watchman. Assignment and response cards, and other data should be in drawers or compartments.

Room and desk should be amply lighted; approved fixtures to insure minimum glare and shadows. Concealed lighting of step-downs or setbacks.

Floor and wall construction to provide easy access to wires and cables.

Provision for heating and ventilation.

WORKSHOP

Can be an asset!

Even in a city that has a fire department repair shop, a station workshop is an asset. It can be used in two ways: to facilitate adjustments and minor repairs to apparatus and equipment and to provide useful occupation for personnel in idle time.

Factors to be considered in planning the workshop are:

Location: preferably on the same floor with apparatus, but divided from it. Otherwise in basement, or outbuilding. It can be part of the station storeroom.

Size: depends upon extent and degree to which repairs and adjustments must be made in the station; space should be provided if possible for light machinery such as drill, grinding wheels, etc.

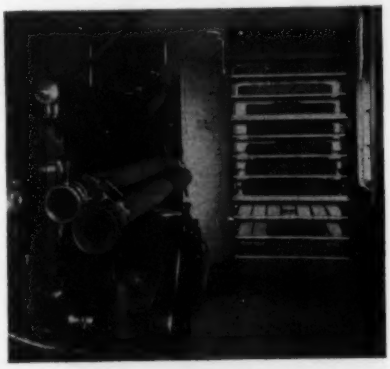
Equipment: to be governed by requirements. In addition to tools and equipment there should be sturdy bench and vise; tool cabinet; drawers for storage and appliances; electrical, gas, water and air connections; ample heavy duty electrical outlets; trouble-lights and cords; air-hose; garage-type dolly; hydraulic jacks, etc.

Furnishings: Ample lighting (daylight type) vibration proof fixtures; tile or other cleanable walls; asphalt tile, "battleship" linoleum or other floor covering on insulated concrete floor. Room sound-conditioned. Communications and fire alarm connections with watch or control room.

APPARATUS ROOM

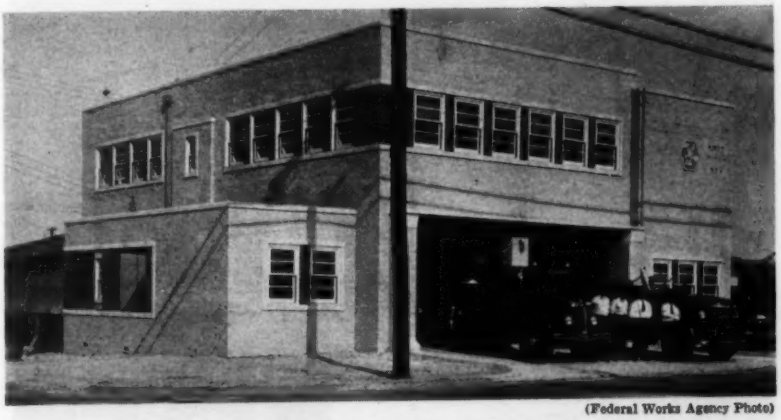
The fire station's "show room"

What the first floor is to the department store, the apparatus room is to the fire station. Here are some of the



Hose Driers on Apparatus Floor Save Room in Kalamazoo Station

Interesting New Dwelling Type Station, Kalamazoo, Mich. Porch, curtains and lamps in windows, further "home" atmosphere.



(Federal Works Agency Photo)

Simple, Practical FWA Station No. 6, Newport News, Completed 1943

Photos Courtesy Miami Beach F. D

things to think of in planning this detail:

Size: Ample provision for parking and movement of present, and possible *future* apparatus and vehicles (anticipate changes in size and design of vehicles).

Arrangement: Sliding poles, stairways; gasoline fill-pump; drainage trays; hose-drying racks and "watch-desk." Front and rear exit and entrance for "drive-through" an asset. Elimination of obstructions such as posts and pillars.

Doors: Overhead, counter-balanced type, preferable.

Lighting: Concealed or recessed, glareless, shadowless lighting in fixtures that can be easily reached, removed and replaced. Ample electrical "convenience" outlets for trouble-lamps, chargers, etc.

Floors and walls: Floors preferably of concrete, colored or uncolored, smooth finish, painted with approved waterproof cement paint. Inlays as guide lines for placement of apparatus. Floor well drained and waterproofed. Designed to carry a 125 lb. minimum live load. Set-in (inlay) floor lights for lighting underside of apparatus. Rounded corners throughout, to facilitate cleaning.

A feature of not too distant apparatus floors may be built-in heating and underfloor wiring. The latter already being incorporated in floors of fire alarm rooms and headquarters to facilitate concealment of and changes in wires and cables without disturbing floors.

Walls and wainscoting to conform to architecture. If "residential type," tile, terraza or other material may give way to panelled wood (fire-proofed) or composition. Room should be sound conditioned.

BASEMENT

Needn't be a "dungeon"

If specifications call for a basement it should be planned and finished with a view to utility and convenience. In addition to housing the station heating, air conditioning, and humidifying plant, air compressor, if any, and hot water system, part of it may be set aside for certain recreation and or sports and storage.

Storage space should be provided for fuel, depending upon the type of heating system, and for air, water and food (yes, frozen food lockers have found their way into the fire house!). No below-street level storage of oils.

Recreation facilities may include bowling alley, indoor pistol or archery range or games (watch dampness).

Basement may also house laundry equipment and work shop.

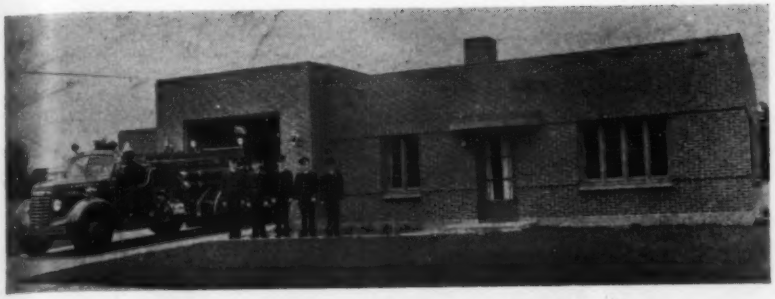
Some stations may find it advisable to install a repair-pit, with trap and elevator giving access to underside of apparatus on apparatus floor or upstairs workshop.

"Daylight" lighting with remote control switches.

Clothing and hose driers may be located in basement.

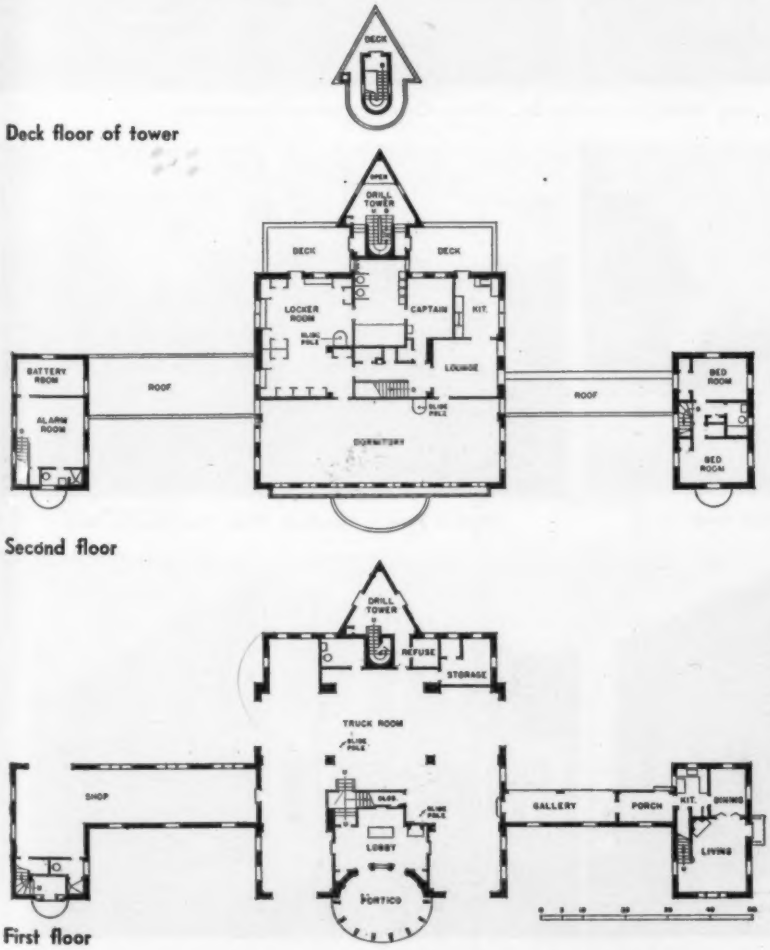
Miami Beach No. 2 Station

Read down (top): Modern station: note modernistic hose and drill tower; (2) Lounge, with radio; (3) Dormitory—note Venition blinds; (4) Tile-lined complete kitchen; (5) Repair shop.



New One-Floor Brick Station of Eng. Co. 2, Lewiston, Idaho.

New Bungalow Type Station With Tile Roof, Sacramento, Cal.



Floor Plans of Modern Miami Beach Station. (See Page 380.)

LAUNDRY

It's entirely possible!

Experiments with "home laundering" of work clothes, and even company sheets, bedding, etc., in fire stations over the past few years indicate the modern fire station may well be equipped with limited laundry facilities, or a complete home laundry, including laundry trays, washing machine, ironer and dryer.

Logical place for these facilities is the basement, if such is provided; otherwise they can be installed in an extension or separate outbuilding, or as part of the kitchen or workshop.

KITCHEN

Home environment can enter in

Under modern working conditions, a kitchen should be a functional unit of every fire station.

Its location in the station, arrangement, layout and equipment will be determined by the same factors which influence the installation of a kitchen in the home. It may well have a "homey atmosphere" in fittings and furnishings.

ATTIC

Can be attractive and useful

Modern architecture calls for utilization of every foot of space.

The fire station attic, if design permits, should not be a dark, forbidding "no man's land" a catch-all to house dirty records or other miscellany. It should be finished off, lighted, heated and ventilated to serve a definite purpose. This may be storage or records and data (it may be the station's historical museum) or it may be recreation or study room.

ELECTRICAL INSTALLATIONS

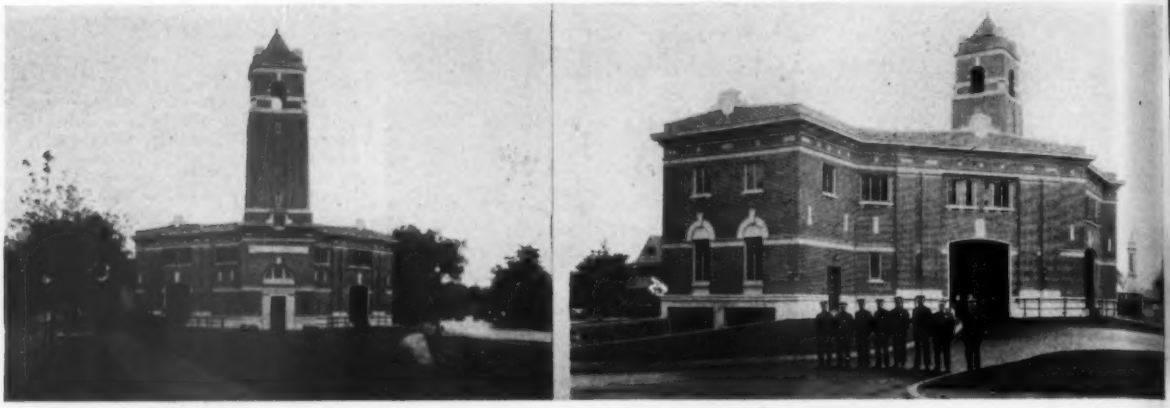
Put all kilowatts to work

Circuits. Provide *ample* light and power circuits for all present and *future* needs. All wiring and cable of approved specifications; concealed and protected. Preferably underground entry of all light, power and fire alarm circuits. Readily accessible fuse-boxes. (See Apparatus Room)

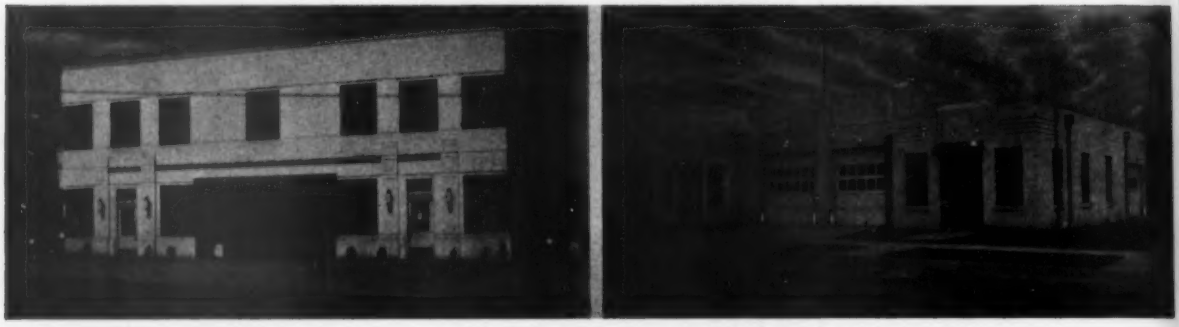
Standby. Anticipate power breakdown; have a reserve or standby source, if no more than provision to connect standard portable fire department lighting unit to system (standby power may be necessary to operate certain electrical automatic devices).

Outlets. Install plenty of "convenience outlets" throughout station, handy for clocks, extension cords, trouble-lamps, reading lights, radio, battery-chargers and operation of small tools and equipment.

Lighting. Adapt illumination to the respective area to be lighted. Fluorescent may be suitable for reading room, game room, lounge or library but unsuitable for apparatus room and dormitory or sleeping rooms (it functions more slowly). Provide *ample* light throughout but particularly for apparatus room, watch or control room and workshop. If station architecture follows a period design, where possible utilize corresponding period fixtures. Provide for outside illumination of approaches and entranceways; warning lights or signals; identification boards or insignia—spot (reflector) or flood-



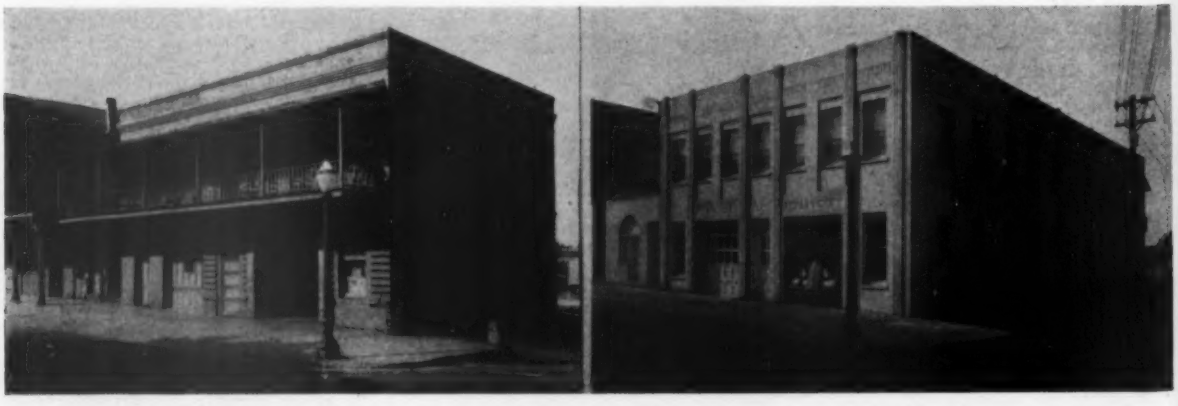
Front and Rear (Right): Arlington, Mass., Multi-exit Fire Headquarters; Note Below-level Shop Entrance.



New Stations, Junction, Tex., and (Right) Gainesville, Ga. (Photos Courtesy Portland Cement Assn.)

New Fontana, Calif., Station Has Hose Tower.

Stone Station in Hingham, Mass., Has Coat-of-Arms.



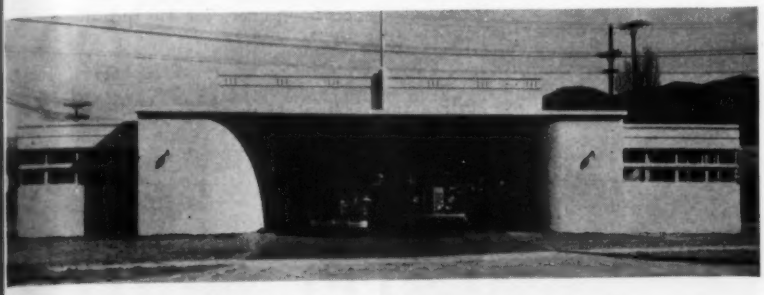
Before (Left) and After Fire Station at Newberry, S. C., Was Modernized and Had "Face Lifted".

lighting. Some stations provide for floodlighting of street approaches and grounds, controllable at the watch office.

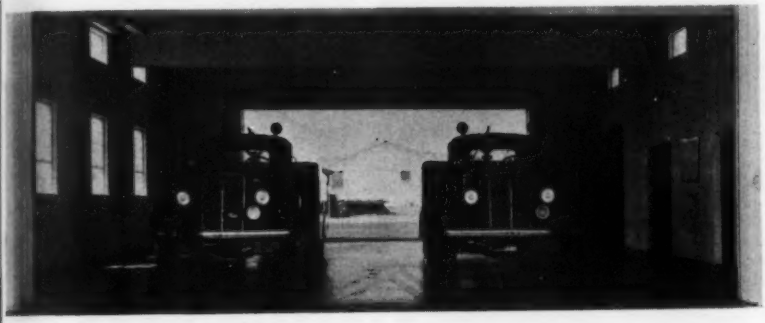
Concealed and/or directional lighting of all sliding-pole holes and doors; stair-treads; steps and cut-backs.

Fixtures. "Glareless," vibration and jar-proof fixtures. Locate out of harm's way and to reduce shadows to minimum.

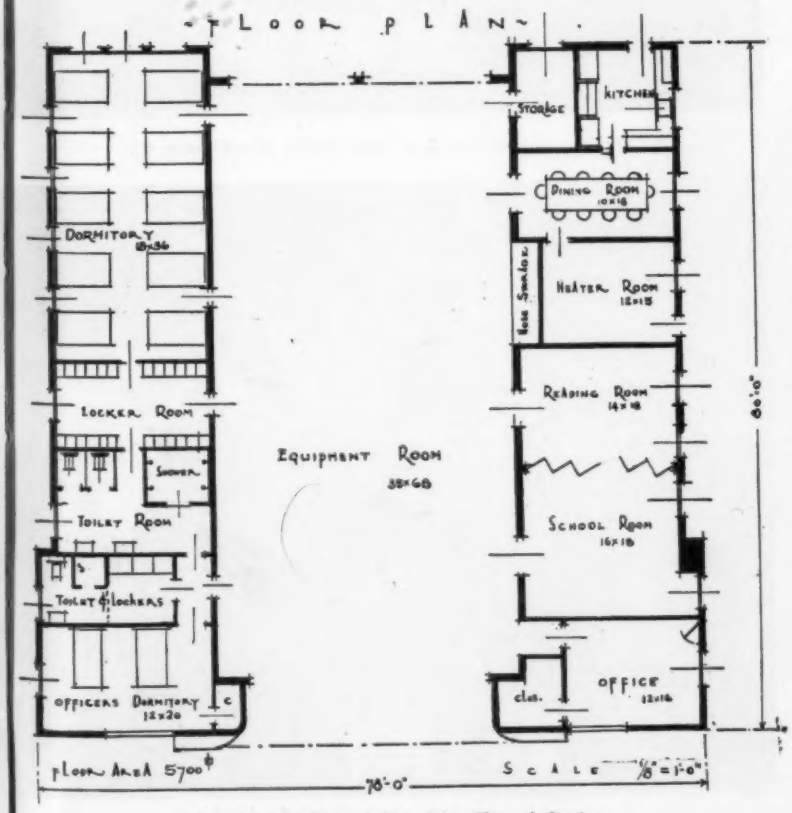
Automatic Features. Utilize all possible automatic electrical features such as: "on-and-off" lighting of dormitory, apparatus floor and approaches, door-control lights for stairways, closets, storerooms; mechanically controlled apparatus doors (auto' closing) "seeing eye" control where desirable; automatic control on heating, air-conditioning, ventilating; recording devices for registering apparatus "in" and "out" as well as all signals and fire alarm communications (these will be a part of modern fire alarm signal system). In this connection, check with you fire alarm superintendent on provision for safe, efficient installation of fire alarm communications facilities, with receptacles for portable telephone jacks, house phones, inter-communicating systems; amplifiers, buzzers, etc.



New Streamlined Burbank, Cal., Station Has Distinctive Features
Severely Simple Front Entrance With Offices on Wings



Drive-Through Apparatus Floor Gives Room and Light.



Floor Plans of Burbank, Cal., Drive-Through Station

OFFICE

Need not be too "official"

The business office, should preferably be set apart from the control or watch room, on the ground floor level, integral with or attached to the officers' sleeping quarters; toilet facilities provided. In small stations sleeping facilities may be concealed in alcove. A disappearing bed is all that is necessary to convert office to dormitory.

In bungalow and residential type stations the office may be furnished in simple "homelike" motif, with curtains, venetian blinds, rugs, stand lamps and pictures. Even in the most "business-like" fire stations, the office can be made attractive and livable.

A separate entrance to office is advisable so that entry and exit need not be through dormitory.

The office may house the station library. Files (for records) may be concealed, together with telephone, annunciators, and other communications and alarm facilities.

RECREATION

"All work and no play——"

Provision for recreation and athletcs or sports facilities should be included in tomorrow's fire station, which can be the fireman's club as well as his business home and office.

It is not always possible to incorporate outside recreational facilities with the fire station layout, due to limintations in type and size of station, location, shape of plot, and surroundings. The nature of the outside sports or athletics will depend upon consideration of these factors and means taking advantage of every favorable detail.

Whatever the kind of outside recreation, the men of the station should be within easy distance of the apparatus room.

Under favorable conditions, handball or even tennis courts may be added. "Clock-golf," bowling on the green and croquet, require only small level plots, well sodded. Appropriate landscaping may conceal courts or grounds.

Other space for outdoor exercise and games (or gymnasium) may be found on roof area or in rear court.

Interior recreational facilities may include bowling alleys, pistol-range, pool and billiards, table-tennis, archery (see "Basement" and "Attic").

Consideration should also be given game rooms, reading rooms or library,

These details may be incorporated in lounge or living room. A combination meeting-room and game room may be made by means of folding or removable partitions.

Location of noisy games or sports facilities should be considered with relation to proximity to study rooms, dormitory, sleeping quarters or offices. Seclusion for study and reading is advisable.

OUTSTANDING FEATURES

In tomorrow's fire stations

Reviewing plans and specifications for tomorrow's fire stations, here are some of the indicated features:

Closer conformity of architectural design with architectural environments. You'll have to look twice to "spot" most fire houses. More landscaping.

Fire retardent construction *throughout.*

Multiple and "drive-through" entrances and exits.

Chromium and stainless steel replacing brass.

Plenty of light—natural and artificial, but even the artificial light will be "daylight." Also ample light and power circuits and outlets throughout station. "Glareless" and "Shadowless" fixtures.

Automatic features and gadgets galore: door openers and closers; light-cutons and cut-offs; pole-hole guards; smoke detectors; control of heating, ventilation, air conditioning and humidification; water-heating, etc.

Sound-conditioning (in some stations bells will give way to chimes).

Watch, or control, room supplants the old "watch desk," resembles the control room of a broadcasting company, giving watchman full vision of apparatus floor and entrances. Shatterproof glass, plexiglass and other vision-free partitions.

Use of glass block, plastic, composition rubber and other modern building materials.

Addition of modern kitchen; "home" laundry; study and reading rooms; recreational facilities.

More lavatories throughout station—and more modern lavatories.

Individual, ventilated, heated, sanitary lockers for every man.

Roomy, light, ventilated and heated washrooms. Shower and washing facilities for every man.

Well equipped workshop that serves dual purpose of furnishing repairs and encouraging craftsmanship in personnel.

Stairways with narrow treads: easy to ascend and descend. Well lighted. Substantial handrails.

Plenty of convenient storge space—air conditioned.

No more unsightly hose towers; indoor hose and clothes drying.

More homelike and clublike atmosphere in station furnishings and fittings.

DORMITORY

Has been a great transition

The old drafty, gloomy dormitory, with its brass beds, straw mattresses, "horse blankets," "odoriforous" lockers, and hard wooden chairs is ancient history. The modern dormitory has "all the comforts of home,"

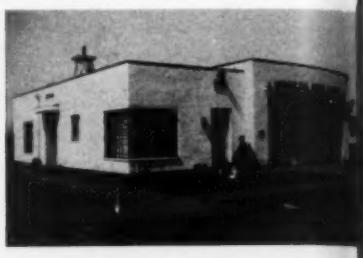
Modern heating, air conditioning and ventilating and lighting systems have made a great transition. So. also, have improvements in construction and furnishings, such as sound conditioning, insulation, inlaid and other modern flooring and floor coverings, venition blinds, concealed "daylight" lighting.

In some dormitories where lockers are located in the sleeping quarters (we'd like to see the term "bunkroom" discarded forever), the heating supply duct is furred in above the lockers; air is exhausted below them through spaces between the bottoms of the locker doors and the floor, providing for heating and ventilating lockers and dormitory simultaneously.

Individual lockers, or closets should be provided for personnel, and may contain mirror, dressing shelf, pull-out chair, drawers for kit and other innovations.

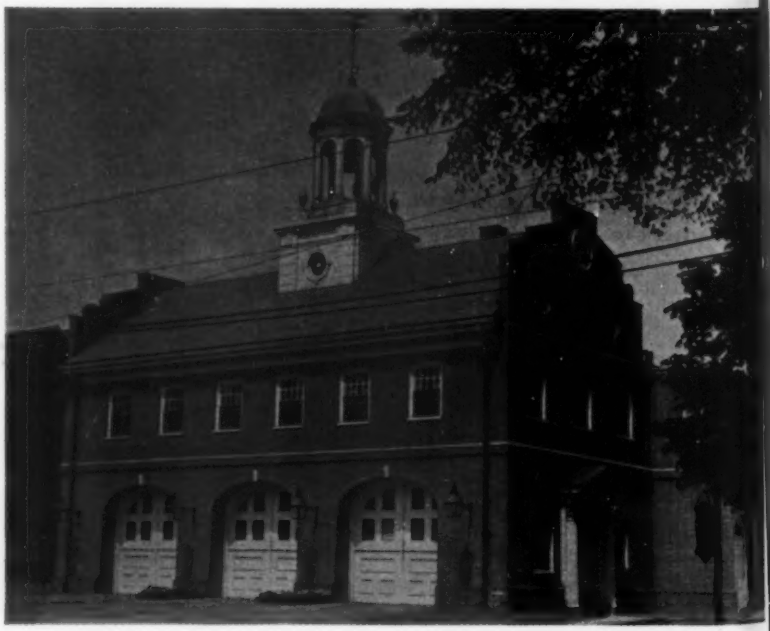
Sliding poles will be in corner closets or recesses with openings protected by directional automatic lighting and safety features.

A Fire Station Garden, Arlington, Mass.



Simple But Roomy Station, Newark, Cal.

Attractive Commodious Small Town Station, New Canaan, Ct.



One of Arlington, Mass., Interesting Colonial Period Fire Stations.

FOG AND FOAM CONTROL FIRES IN LARGE CRUDE OIL TANK

Tests Held at Findlay, Ohio, Develop Some Interesting Data; Tank Ninety-Three Feet in Diameter

WHAT are believed to be the most comprehensive, large-scale tests of extinguishment of crude oil fires by means of water-fog and foam were held in Findlay, Ohio, April 30 through May 3, at the Moorhead Tank Farm of the Standard Oil Company (Ohio), under the direction of G. W. Henneken, vice president and R. T. Henderson, Ohio Safety Engineer.

The undertaking was jointly sponsored by the above company, and three manufacturers of extinguishing agents, the Automatic Sprinkler Corp. of America, Youngstown, O., Pyrene Manufacturing Company, Newark, N. J. and National Foam Systems Inc., Philadelphia, Pa.

The Standard Oil Company (Sohio), provided a full scale, 93-foot diameter steel storage tank with oil for the tests,* as well as the necessary water supply, pumps, piping, instruments and facilities for gauging and registering the tests, while the manufacturers furnished the piping and other material for their installations, and shared the cost of the fuel. A large crew of navy photographers under command of Lieut. (j.g.) F. Terzo and Ensign Oscar Boetticker, Jr. photographed all details of every test, in technicolor and black-and-white.

Because, at this writing, the final details of the tests, including official temperatures, burning times, extinguishing times, fuel values before and after tests, etc., have not been released by the Standard Oil Company (Sohio) no official report can be given.

Eight Tests Included

Unofficially, there were eight complete tests; the first three by the Automatic Sprinkler Corporation, using a built-in automatic fog-sprinkler system under the direction of E. B. Rumble, for H. N. Rider, Manager of Technical Division of the company. The object of the tests, as stated by the company were: *"fire to be held under control while gasoline burned; as soon as gasoline and light ends were no longer being distilled off, fire in the remaining heavy oils to be extinguished."*

In its layout, the company installed 84-668WA fire-fog nozzles based on a spacing of 10'–0" between nozzles, and 10'–0" between lines of nozzles, making an area to be protected by each nozzle of 100 sq. ft. Additional nozzles were installed around the circumference of the tank to protect the voids. Discharge was through two 6" rate-of-rise deluge valves connected in series to eight heat actuated devices. Water under pressure for all tests was supplied by four 500 g.p.m., O.C.D. trailer pumps. Thermocouples were located strategically throughout the tank interior to provide relative heat readings.

*The oil used was regular crude 36-38 spec. grav. containing about 25% gasoline.

In the first test, the rate-of-rise valves operated in 22 seconds after ignition of the oil and the fire was extinguished in 20 min. 10 sec. with no damage to piping or tank. Thermocouple readings were low. Discharge pressure was 70-80 PSI. Fire-fog coverage of crude oil surface 0.210 to 0.215 GPM per sq. ft. Discharge from each nozzle 21.0 to 21.5 GPM. Water discharged in test 35,800 gal. or 7" in tank. Height of tip of fire-fog nozzle above crude oil surface, 8'.

In a second test residual oil was ignited; the fire-fog system tripped in 41 sec. and extinguished the fire in about 3 minutes. No temperature readings were taken. Estimated 6400 gallons discharged at 80 PSI. Trips 7' 5" above oil surface.

In a third test, additional oil was added, to replace burned volume, and ignited. The system operated in 26 sec. and fire was held under control and extinguished in about 39 minutes. Temperatures were higher than on previous tests. Discharge, 72,300 gal.; height of tips 7'–5". Pressures varied from about 75 lb. to 100 lb. at intakes.

The conclusions reached were said to support the soundness of the company's principle of fire protection by controlled burning of flammable liquids.

Tests four to seven were conducted by the Pyrene Development Corp. using mechanical foam, applied through six identical foam applicators equi-distant around the tank on the tank designed to be of such size that three units should represent a proper commercial system for a tank of the size involved. Each foam maker was designed to pass 160 GPM of water and pick up 8 GPM of Pyrene Foam Compound at an operating pressure of 100 PSI at the foam-maker. Actual pressures at the solution pickup points (there were two, located about 100 ft. but equivalent with valves and elbows to 150 ft. distant from the foam maker) varied from 145 PSI to 165 PSI at the foam-maker. The actual water ratio ran from 175 GPM to 195 GPM during the several tests. The illustration shows the arrangement at the pickup points.

In the first of the company's tests, about 16" of crude oil on the surface of the water in the tank was ignited and given 3 min. pre-burn before foam was applied. Temperature readings exceeded 2200 deg. F. at some couples. Unofficial time for extinguishment, 4 min. 2½ sec. In this, and nearly all subsequent tests it was disclosed that the windward side of the tank was the hottest.

A second test, using Navy Specification V mechanical foam was conducted. About a foot (1300 bbl.) of oil was added. Pre-burn was over 3 min. This fire was unofficially pronounced out in 5 min. 56 sec.

In a following test fewer applicators were used. Residual elements of the old Navy V foam blanket slowed the spread of ignition but a very hot fire developed (reported 1800 deg. F. in center of tank). With reduced applicators this fire was unofficially clocked "out" in 37 min.

A final test, using mechanical foam, but employing only four applicators, with 3 min. 20 sec. pre-burn, was held.

Photo Courtesy of the Standard Oil Company of Ohio

Pix of Burning Oil Tank

Pre-burn before start of a Pyrene test. Photo shows one of two Pyrene control, pick-up points with three 2" valve-controlled risers which fed three applicators. Drums containing liquid foam solution and flexible rubber pick-up tubes shown in foreground. Risers each feed a 2½" water line, and a parallel 1" line carrying water and foam solution connecting with each applicator. 2½" water line carried 130 GPM foam; solution line handled 22 GPM water and 8 gal. of foam per min. One of the two National Foam aspirators is seen right of center Pyrene riser.

Some difficulty was encountered due to buckling of the tank under the several preceding hot fires which impaired the effectiveness of some applicators,** the extinguishing time was unofficially clocked at 30 min. 6 sec.

The final test was conducted by the National Foam Systems Inc. using the same crude oil (approx. 3 ft. or 4000 bbl. in tank) applying Aerofoam delivered through two applicators located on opposite sides of the tank which, in turn fed through delivery pipes to a foam mixer somewhat similar to the type used in preceeding tests. The aerofoam was to be applied to the oil surface inside the tank through two National Moeller Tubes. In this test only two OCD pumpers were used. These took suction from the 6" supply line just outside the fire levee and were reported operated at 135 PSI. A single 3" line carried the water containing 6% aerofoam liquid to each aspirator, the liquid being mixed into the water stream by means of a small proportioner attached to each pumper.

Pre-burn was about 6 min. to permit fire to extend fully over the surface area.

The unofficial time clocked for the extinguishment of this fire was 36 min. One aspirator was reported to operate at only about 30% efficiency due to the same tank failure which interfered with the temporary installation (as in the case of Pyrene). Both Moeller tubes were found to have distintegrated from prolonged exposure to high temperatures and the extent of their effectiveness could only be conjectured.

**In a permanent installation this trouble, caused by tank buckling would be eliminated.

Nearly Three Billions in Fire Loss in Ten-Year Period

The aggregate property loss from fire in the United States in the ten years ending December 31, 1944, was approximately $3,000,000,000 according to the annual report just issued by the Committee on Statistics and Origin of Fires of the National Board of Fire Underwriters. Matches and smoking continued to be the worst offender in starting fires and property losses.

In pointing out that the loss of $437,273,000, in 1944, was the greatest since 1931, the report adds: "Periods such as the past few years with great industrial expansion, with inflated values and emphasis upon speed of output, naturally produce higher losses in terms of dollars, but we cannot at this time determine the relative loss, adjusted to fluctuations in commodity prices and variations in the amount of property exposed to loss, as the necessary data are not yet available."

J. T. Blamey Named Chief at Spokane

James T. Blamey has been appointed Chief of the Spokane, Wash., Fire Department, to succeed Chief William P. Payne, who was recently elected a City Commissioner.

Chief Clamey joined the Fire Department as a substitute in 1910. He became a regular fireman in 1911, was promoted to lieutenant in 1914, to captain in 1931 and to assistant chief in 1935.

SHORT CUTS AND GADGETS

HELMETS AND CAPS

Instead of painting fire helmets, which makes them crack or peal, I find it better to use common shoe polish, applied regularly, which keeps them looking neat and helps prevent their drying out (J. T. O'B.)

In this connection an anonymous contributor to "Short Cuts" recommends giving the helmet a going over with Simonize wax; furthermore, he says this is ideal for shining up the uniform cap visor and, in a pinch it can be used on buttons and badges—in fact, any personal "bright work."

* * *

SAFE REMOVAL OF MANHOLE COVER

One of the most dangerous jobs of ventilation is a manhole fire. When the cover is lifted slightly, allowing more oxygen to enter the manhole, there may be a violent explosion, causing the cover to be blown into their air, with possible injury to firemen.

The safest way to ventilate is to stay as far away from the manhole cover as possible, and then lift the lid. While some fire companies carry special hooks for lifting covers, they are very few in number as they are not regular fire department equipment. Every fireman, however, carries a ladder or a hose strap with a hook on one end and a loop on the other. If the hook is inserted in a hole in the cover and a six foot hook (or longer) is caught in the loop of the strap as illustrated above, the cover may be safely lifted and pulled back.

LIEUT. W. J. C.

* * *

FOR SHUTTING DOWN SPRINKLERS

The following idea will assist in the quick shutting down of sprinkler systems and prevent water damage, especially in large mercantile buildings, where floor areas are cut up into small workshops or offices, owned by separate concerns.

A survey should be made of the fire company district by the building inspector (or if there is no regular company inspector, by some one delegated to do it) to note the location of sprinkler shut-off valves and a typewritten record of them in book form, using a page for each address, then a line for each floor with room number or section of floor where shut-off is to be found. This book should be carried on the apparatus at all times, and when responding to a sprinkler alarm, accurate location or shut-off valves can quickly be determined. A carbon duplicate can be retained in company quarters. Here is a page layout—

Submitted by C. P. B., Brooklyn, N. Y.

* * *

IMPROVISED HOSE HOLDER FOR DUMP FIRE

"Sometime ago I was injured in line of duty and transferred to a company on the outskirts of the city. While serving in this company we spent many weary hours on a dump in our district. My suggestion, which has been tried out by me and my fellow workers, has lightened the burden considerably. If you pass this idea along it may help other unfortunate firemen who are doomed to long hours on a city dump.

In our department each man is equipped with two ladder ropes to secure lines to ladders, etc. An old piece of pipe, half or three quarter inch and five of six feet long, together with the ladder ropes will take all the weignt and back pressure of the line off the man holding it. Just secure the rope around the hose the regular way and then slip the metal hook in the end of the pipe. It's just as simple as that; you can stand there with the pipe held upright with one hand—for hours if need be, without fatigue or holding a loaded line. It will also take care of any sudden increase in pressure such as has sent many a man flying over the edge of the dump. Just a slight inclination of the pipe against the pressure will be all that is needed. This labor saver is particularly helpful in these days of manpower shortage.

GEORGE WILKINSON, Pumper
No. 11, Fall River, (Mass.)
F. D.

ADDRESS 395—4th Avenue
Cellar: Shut-off valve for entire bldg. in boiler room.
1st Floor: Shut-off valve for all stores and loading platform in boiler room in cellar.
2nd Floor: Shut-off valve in Room 205 for entire floor.
3rd Floor: Shut-off valve for entire floor in center of West side of bldg.

The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

SPREADING LIFE NETS BENEATH LADDERS DURING RESCUE OPERATIONS

THE discussion in this round table is a continuation of that which appeared in the May issue of FIRE ENGINEERING on the practice of spreading life nets beneath ladders when rescues are being made.

The generous response from our readers made it necessary to carry the discussion over to this issue.

Readers are invited to send in their comments on this subject which is given in the box on a following page. Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40 Street, New York, N. Y.

HERE IS THE QUESTION

It is a practice of some fire departments to spread life nets under ladders when rescues are being made.

1. Do you believe this to be a desirable practice?

2. If so, why?

3. What, in your opinion, might be arguments against this procedure, if any?

Discussion of the Topic

Ralph H. Drum, Chief, Green Bay, Wis.: Spreading life nets under ladders in rescue work is a good safety measure if you have men available for this work. Usually when rescue work is necessary, every available man is trying to do two men's work. It is almost impossible for him to do anything that is not absolutely essential. Many of these problems look good on paper, but in actual practice, cannot be carried out.

James L. McLane, Chief, Charleston, W. Va.: To spread a net under a ladder while doing rescue work may be all right, providing you have enough men to carry on the other necessary work. This department has never done it. However, if someone can convince me it should be done, I'll gladly adopt that practice.

Zephirin Drouin, Chief, Lewiston, Me.: This practice is not being done in our department, but I think it's a good idea, because during a rescue there might be more than one person to be rescued and a life net would be a protection to both rescuees and firemen. Furthermore through the excitement, some of the people trying to escape might try to jump or reach the ladder, and again with the life net, both firemen and the trapped persons could be saved.

In our case, there might be an argument against the practice, for the holding of the net would take many of our men from essential work. During these times our manpower has diminished considerably, and so every man is needed on his particular job.

L. J. Flores, Chief, Shreveport, La.: I do not believe the practice of spreading life nets under ladders is a desirable one. If you have time to raise ladders and spread life nets your customers will have time to walk down. I don't think rescue squads should have to have life nets spread under ladders. If life nets were used for rescue work, the ladder wouldn't be necessary.

Leo J. Urbanski, Chief, St. Joseph, Mo.: I cannot see where the use of a net under a ladder in rescue work can be of any benefit.

It would be impossible to place the net in a position where it would definitely catch a person falling from such a ladder, as he might fall to one side or the other. In trying to move the net around the base of the ladder, it is possible to knock the ladder down and cause additional injuries to the members of the net crew.

E. Desaulniers, Deputy Chief, Woonsocket, R. I.: In my opinion, the practice of spreading a life net under a ladder is a poor one.

When a ladder rescue is being made, the man doing the rescue is facing the building. If something should go wrong, he would fall off the sides of the ladder or backwards. For that reason a net under a ladder would be useless, to my way of thinking.

Brooks McClure, Chief, Huntington, West Va.: I do not believe it is a desirable practice to spread a life net under a ladder during rescue work, for it would slow up the operations of placing ladders and moving them from one window to another.

Thomas R. Hartnett, Chief, Racine, Wis.: I am not in favor of spreading life nets under ladders during rescue operations. The spread of the ladder would not give enough space to maneuver the net.

C. A. Cunningham, Chief, St. John, N. B.: I believe the practice of spreading a life net under a ladder is a desirable one. In case of accident, if the life net is ready, a life might be saved.

On the other hand, it would require manpower that could be used to better advantage elsewhere to hold the net.

Charles Kuhl, Chief, Sioux City, Ia.: I do not know of any place where life nets are spread under ladders when rescues are being made. I do not believe it to be a good practice because most departments do not have the manpower to do it. It would practically be an impossibility to get a net close enough to catch a person from a ladder without injuring the men holding the net.

Andrew T. Callahan, Chief, Harrison, N. J.: It is not a general order of the Harrison Fire Department to spread a life net or nets when a rescue is to be made by ladder, although a net is removed from the apparatus and sufficient manpower available to stand by in the event of another person or persons might appear from a different window or the roof of the building involved.

The officer in charge should determine the method of rescue. However, it depends on the type of occupancy of the building involved. Factory, school, hotel, lodging house or apartment house rescues can be effected without the use of ladders or nets. I fully believe preparation should be made to augment ladder rescues.

G. M. Twaddle, Chief, Reno, Nev.: We have very little rescue work on ladders in this department. We have not, since I have been in the department have had any fires where it was necessary.

Unless there was a chance that people might have to jump, we would not spread the net.

The only reason I can see for spreading the net would be the saving of time in case it was needed.

Boyd P. Hensman, Chief, Hastings, Neb.: We have never had any experience with a life net as our department is small in the way of manpower. I believe, however, that it is a desirable practice if the manpower is available.

The only argument that I can see against this practice is that it might take too many men for rescue work and delay the work on the fire.

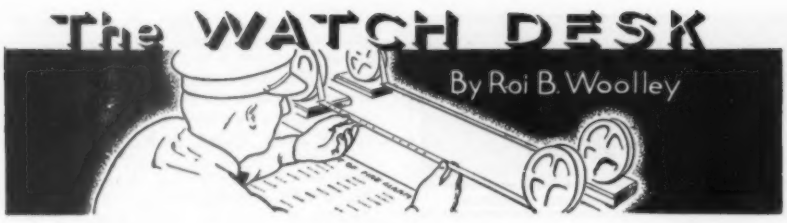
Elmer S. Laurence, Chief, Logan, Utah: I firmly believe in taking any and all precautions against possible further damage or injury to people being rescued by ladder. Some may claim that such a procedure might cause delay and use up valuable time, but the ladder rescue could be made at the same time the nets are being spread.

Frank Meunier, Chief, East Hartford, Conn.: I believe the practice of spreading life nets under ladders when rescues are being made is a desirable one. Lack of trained men and shortage of manpower in most departments make it impossible.

Victor H. Veit, Chief, Stamford, Conn.: I think the practice of spreading a life net under a ladder when a rescue is being made is a good one to follow if the correct type of net is available.

There are three types of nets that come to my mind at the moment. First, the regulation circular life net which is 9 or 9½ feet in diameter. This type net has to be held in a

(*Continued on page* 412)



Our inquiring reporter overhauls the firemanic news of the day

The Hot Seat!

Prize item of the month is postmarked, N. Y., and was *not* sent us by Chick Sales. Here it is, just as the paper printed it:

"Firemen called to a Cortland home found the bathroom toilet ablaze. Occupants of the house excitedly explained they had thrown in some kerosene to keep the water from freezing. Someone absentmindedly tossed in a cigarette butt. Firemen pulled the chain."

This one ought to give the truckhouse humorists copious copy for captions!

* * *

A Lucky "Leak"

At 1:40 on a December day, according to the records of the A.D.T., (we don't have to tell you what A.D.T. means) a burglar alarm signal was received by the Chicago office from the United Motor Service Inc., of that city. When the A.D.T. guard and police arrived at the premises they could see water aplenty splashing against the inside of the front windows.

The fire department was at once notified, responded, forced its way inside and found fire had started on a second floor work-bench and three sprinkler heads were in operation.

A passerby, gaping at the water striking the window, said to an "arm o' the law as he rode up *"jeez, there's a leak in there!" "Yeah,"* replied the A of the L, *"and it's a damned lucky leak!"* The fire department agreed!

* * *

Watch Yer Salvage!

Tom Magner pops us this 'un, hot off the news wires. In Quincy, Mass., on April 11th, firemen at the Wollaston Station removed their shoes, donned rubber boots and left to fight a fire.

While they were gone, a salvage truck (not an F. D. salvage corp. vehicle, of course) on its regular rounds, picked up several boxes of clothing that had been left at the fire station—and, sad to relate, also grabbed off the shoes that lay nearby.

You can imagine the rest. It was two hours before the Brothers recovered their footwear after "overhauling" piles of old clothes at the municipal garage.

* * *

Bats (?) in the Belfry?

Many years ago in Minneapolis, fire, originating from sparks from a passing switch engine that dropped into a bird's nest in the steeple of a church, seriously damaging the structure. Not long after, in Kalamazoo, Mich., a church steeple was damaged by fire to the extent of $5,000 by fire caused, it is said, by sparks from a chimney which were blown into a bird's nest in the belfry.

This is the nesting season, chief, so take a tip and be sure there are no "bats in the belfry"—or do bats build nests, being mammals? Tennyrate, suggest to the sexton that he keep a clean steeple!

* * *

Curb Service

Members of Hose 4, Dunkirk, N. Y., were gathered in their hall of a Thursday evening to debate about how soon the city would buy 'em a new truck when discussions were rudely interrupted by screeching of brakes on a train at the grade crossing just south of the hall. Assuming there'd been an accident the vamps rushed to investigate—to discover that instead of a crossing smash, it was their services that were needed, for there, standing almost ferninst their meeting place was a westbound Nickel Plate passenger train, the locomotive cab of which was a mass of flames.

With the aid of foam and other extinguishing agents—including seven lengths of 2½-inch hose and a heavy stream of water, 'tis said, the fire was outed and the Vamps "wrote it for the book"—the first time a railway fire had been brought right to 'em. It developed that engineer of the train, A. M. Alfred, discovering fire in his cab while a short distance outside the city, remembered that Hose 4's hall was located almost on the right-o-way, so he opened his throttle, hustled for the hall, slammed on the brakes when out front and the vols did the rest.

* * *

Hide and Go Seek

This 'un comes from a Quaker City contrib who prefers to remain anonymous, and tells how the Bryn Mawr, Pa., Brothers were put out, no end, because they couldn't find a fire to put out.

Well, the local lads answered an alarm and as two trucks came to a stop in front of the house where the fire was supposed to be nicely waiting for the axe, Chief Horace Parson ordered lines laid because smoke was coming out of every window, and the eaves and doorways. Three of the firemen led the attack into the structure. But one after the other, they all reported to the Chief —"no fire" could be found. And the hunt was on!

For over an hour, the Vamps sleuthed the fire—while the smoke grew thicker. Inside and outside, all-around-the-house, the vol. Sherlocks followed the scent—but no clue, and no fire.

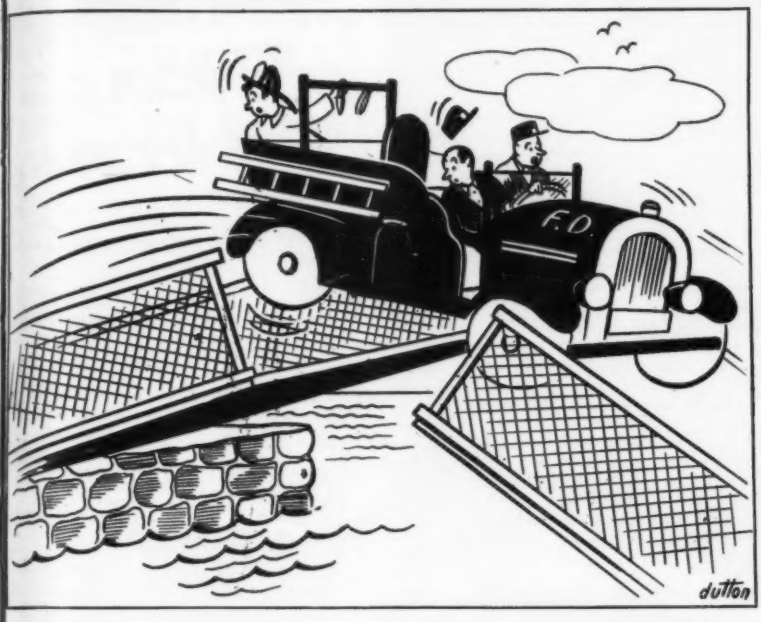
To make a long story short, here's what they finally found. About 150 feet from the house, trash was burning in an incinerator. Close to that there was an underground drain pipe with an intake coming to the surface. In some way a draft was created which pulled the smoke from the fire into the pipe and through it, up to the house—and out of the pipe into the structure. And there you are!

* * *

Hot Off the Tape

Her starched coif afire from a candle she was carrying as a vigil light before a statue of St. Joseph, Sister Maureen, 25-year-old nun died in the convent of St. Catherine's Academy, New York City. . . . 400 pupils of Lincoln High School, New York City, almost had a holiday. At 7:30 A.M. the engineer discovered chlorine gas loose in the basement. At 7:45 P.M. F.D. Rescue Squad No. 3 with gas masks arrived. At 8:00 A.M. they found leak in swimming pool chlorinating apparatus. At 8:40 they had it repaired. At 8:45 they drove off. At 9:00 school opened. Close, but no holiday. . . . The Los Angeles Fire Department, as a safety measure, has ordered "no revolving doors" at large hotels where there are conventions and meetings. . . . Twenty-two persons were killed and twenty-three injured when a locomotive plowed into a packed bus wrecking it and setting it afire on the outskirts of Mexico City. . . . Crash of a Pennsylvania Airlines transport plane in April resulted in death of 17 passengers and three crew members. . . . Once during a lifetime does this happen: One evening at four bells Box 1868 in Brooklyn, N. Y., sounded. It was a MFA—"malicious false alarm." Five minutes later, Manhattan Box 1868 was also an MFA. No intervening signals in either Borough (thanks Jerry Daly). . . . The Legionnaires of Medford, Mass., who have been battling to get one of their number named to vacant $4,000 post of fire chief seem to be outmaneuvred by Mayor Walter Lawrence of that city, who has appointed himself to the position and named Deputy Chief John E. Plant as his assistant. It's all quite regular, according to the wayward press. . . . A five-alarm fire swept the Detroit Armory destroying equipment of 400 guardsmen. . . . According to the Whitewater, Wis., Register, *"Something New Has Been Added to the W.F.D. Equipment* (Whitewater Fire Department) *That "something" says the paper, "consists of a smoke mask connected to an air pump by a tube."* Boys, boys! . . . According to the dopesters, the first fire department to be paid a salary was established in Cincinnati, April 1, 1853. members of the company received $60 a year, lieutenants $100, captains $150, pipemen and drivers $365 and the chief $1,000 a year and his assistant $300. Who wanted to be an officer? . . . At the five-alarm fire at Broadway and 65th street, Manhattan, April 19, spectators snickered over the marquee sign on the Arcade theatre, in the burning building, which advertised: *"The Heat's On"*—Starring Mae West. . . . In Shreveport, La., says P.B., one of our South'n contrib's, the conductor was the only loser when lightning struck a trolley car. Firemen reported that the bolt rang up an extra fare and the conductor was seven cents short at checkup time. . . . In Philadelphia, Pa., a fire chief's car, four engines and two police cars chased two brothers, aged 8 and 9 to catch them hiding behind a telephone pole. "Gimme a break, chief," cried the 9-year-old when he was cornered. But the two were hustled off—charge? Some 20 false fire alarms within about as many days.

FALSE ALARMS



"If We Waited for That Old Codger to Put the Bridge Down We'd Never Get to the Fire!"

Repartee

It was during a big bargain sale and tempers were rising.

"If I were trying to match politeness," said the woman customer, glaring at the salesgirl, "I'd have a hard time finding it here."

"Will you kindly let me see your sample, madam?" the salesgirl replied.

Revenge

Walking round the barracks, the colonel noticed a long queue of men waiting outside the stables. Each held a lump of sugar.

"I'm glad to see you love animals so much," he remarked to one recruit. "I suppose the horse you're giving the sugar to is the pet of the regiment?"

"Not 'arf, sir," replied the recruit. "He's the one what kicked the sergeant."

Money in Figures

Jeanie: "Why did you quit teaching school to join the chorus?"

Queenie: "Well, I think there's more money in showing figures to the older boys."

Last Aid

"An injured man was brought into the plant surgery by two fellow workers. His face was blue.

"It appeared that the man had suffered an alarming looking head wound. His two mates were so upset they could not wait to find a trained first-aid man. To stop the bleeding they had applied a tourniquet to the patient—around the neck!"

National Safety Council News Letter

"Where did I come from, Mama?" "The stork brought you." "And did the stork bring you, too, Mama?" "Yes, dear," "And Grandma?" "Yes." So the little girl wrote on her composition paper: "There hasn't been a natural birth in our family for three generations."

Got His Share

Just before a recent Ruhr battle was begun, the commanding officer shouted: "The Germans are coming, men, but we're outnumbered four to one, so do your stuff."

Old Joe, a Kentucky mountaineer, began to blaze away, but in about five minutes he stopped and leaned his rifle up against a rock.

"What's the matter?" asked the officer.

"Well, I got my four," replied Joe.

Motive

Two soldiers were lying under their blankets, looking up at the stars. Said Jack: "What made you go into the army, Tom?"

"Well," said Tom, "I had no wife, and loved war. What made you go into the war, Jack?"

"Well, I had a wife and loved peace, so I went."

The football season—the only time of year when you can walk down the street with a blonde on one arm and a blanket on the other, without encountering raised eyebrows.

A bachelor is described as a fellow who has been fortunate in his love affairs.

Beggar: Buy a pencil, lady?

Lady: If you are blind, how did you know I am a lady?

Beggar: I'm not blind! I'm deaf and dumb. Must have put the wrong sign on today.

"We'd Better Look Around Once More to Make Sure We Got Them All Out!"

Indiana Presents Fire Prevention Awards

The city of Gary was honored with top honors as winner of the annual Indiana state fire prevention contest at the fifth annual award dinner of the Indiana Fire Chiefs Association in Indianapolis, March 8. About four hundred officers and friends of the fire service attended the banquet.

Governor Ralph F. Gates presented a plaque to John McCracken, Gary Fire Chief and Raymond Coon, Fire Prevention Chief. He also presented plaques to Anderson, represented by Chief Bradley Stinson and Mark Brosier, Fire Prevention Chief, and to Terre Haute as second and third place winners, the latter represented by Mayor Vernon R. McMillan, Fire Chief Albert Rowe and Fire Prevention Chief Michael Hynes.

Editor Receives Honor Award

Roi Woolley, assistant editor of FIRE ENGINEERING, receives honor award from Robert Hamm in the name of the Indiana Fire Chiefs Association at its March 8 banquet in Indianapolis.

First prize in the industrial division was awarded to the Carnegie-Illinois Steel Corporation of Gary, and was received by Fire Chief Joseph Lump.

Indianapolis was honored as the top Hoosier city among participants in the Inter-Chamber of Commerce fire prevention contest, the plaque being received by Fire Chief Harry H. Fulmer, Michael Hyland, Fire Prevention Chief; R. D. McDaniel, and Charles D. Mosier both for the Indianapolis Chamber of Commerce.

Others honored by plaques at the ceremony were the Kingsbury Ordnance plant, Fire Chief Don Early; Camp Atterbury, Fire Chief John Feiock and Col. Hammond; Freeman Field, Fire Chief Jesse Hutsell; and the Nappanee Volunteer Fire Department, Fire Chief Mel Culp.

Individuals receiving honor plaques were Mrs. Bernard A. Lynch, who was presented the Lynch Memorial Trophy as a tribute to her husband, the late Chief Lynch of the Indianapolis Fire Department; T. Alfred Fleming of the National Board of Fire Underwriters and Roi B. Woolley, of FIRE ENGINEERING.

Clem Smith, whose retirement as Indiana State Fire Marshal has been announced, officiated as toastmaster. He received an honorary life membership in the Association from the hands of Governor Gates, who extolled his work.

The speakers were Mayor Robert H. Tyndall of Indianapolis; Mr. Fleming and Roi Woolley, who praised the enviable record made by the state in fire prevention and paid special tributes to Clem Smith and Frank Orr, managing director and business manager of the Association.

N. Y. Chiefs Examination Off

It is reported that New York City will not hold an examination for Battalion Chiefs or Lieutenants in the fire department until after the end of the war, although the department is short of these officers. Instead it is said, unofficially, enough captains will be selected to serve as acting-battalion chiefs until the examination is held—if it ever is; rumors are that legislation may be sought to make these acting appointments permanent and that, if this is done, it will be a serious blow to civil service.

Thirty vacancies now exist in the title of battalion chief and ten in the lieutenant classification.

Indiana Fire Chiefs Present Awards

Banquet given by Indiana Fire Chiefs Association, March 8, is occasion for presenting annual awards for fire prevention and outstanding service. Clem Smith was toastmaster, Governor Gates the leading speaker.

Questions and Answers

Friction Loss in 2½-inch Hose for Small Flows

To the Editor:

What are the friction losses in 2½-inch rubber lined hose for flows from 10 to 130 gallons per minute? From 140 gallons upward, we can secure these losses from various published tables, but no figures are given for the friction losses at lower flows.

F.F.M.

Answer: The table below gives approximate friction losses for flows of ten gallons per minute to 130 gallons per minute.

Flow in G.P.M.	F. L. per 100 ft. 2½-in. R. L. Hose (lbs.)
10	.07
15	.12
20	.18
25	.25
30	.34
35	.44
40	.53
45	.65
50	.75
55	.93
60	1.1
65	1.2
70	1.5
75	1.7
80	2
85	2.2
90	2.4
95	2.6
100	2.8
110	3.3
120	4
130	4.5

Hose Diameters for Ladder Pipes

To the Eidtor:

Please give me the answer to the following questions:

1. When it is desirable to use a stream of water from a ladder pipe the size of hose used in inches is (1) 4½", (2) 4", (3) 3½", (5) 2½".

2. When it is desirable to use a stream of water from a ladder pipe the size of hose used in inches is (1) 3", (2) 2½".

G.E.D.

Answer: In answering your question relative to the size of hose to use in connection with a ladder pipe, the following table is given on the assumption that a 1⅛-inch tip is used on the pipe.

N.P.	Flow	F. L. 100' 2½" (lbs.)	F. L. 100' 3" (lbs.)
50	472	50	19.3
60	517	58	22
70	558	68	26
80	596	77	29.1
90	633	81	33
100	667	96	36

Theoretically, the largest size of hose would be more satisfactory for supplying a ladder pipe, due to the lesser friction loss.

Practically, however, the smaller size hose is better because it can be more readily handled and will give fairly satisfactory results.

Of the several sizes of hose listed, 3-inch hose is probably the most commonly used diameter for 1⅛-inch lad-

S-O-S Fire Guard *vaporizing liquid extinguisher (above) is Underwriters' approved for use on electrical, chemical, gasoline, and paint fires. One quart or 1½ qt. size.*

FREE: Norman Rockwell illustrated calendar featuring Great Chicago Fire. Write for your copy.

Would you use a bus for bricks? A panel truck for gravel? Not likely. Every vehicle has its own job.

And every fire extinguisher also has its own job. Gasoline and oil fires, for example, call for an entirely different extinguisher than textile and rubbish fires.

Stationed near you is a trained Fire Protectioneer able to advise you on the correct equipment for your every fire hazard. Backing him is this 40-year-old concern, manufacturing a *complete line* of Underwriters' approved fire extinguishers. There is no charge for this service.

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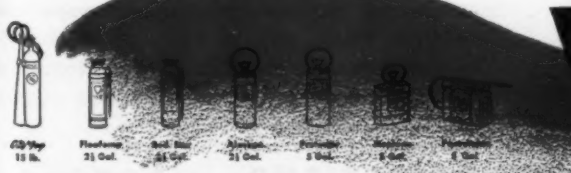

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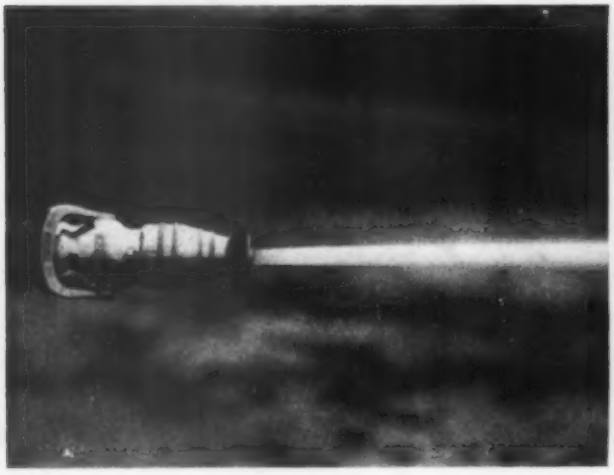
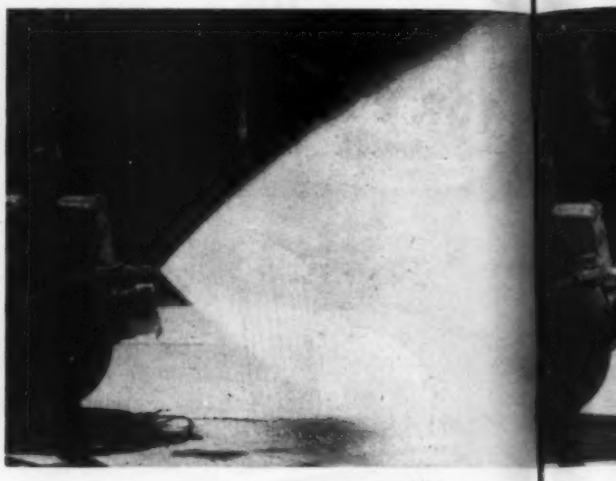
Riepling

A UNIQUE NEW FIRE HOSE NOZZLE WITH



SOLID STREAM

The compact solid stream of the RIEPLING UNIVERSAL NOZZLE formed by a specially tapered waterway gives unusual reach.



WATER CURTAIN

The protective water curtain of the RIEPLING UNIVERSAL NOZZLE under wat drives the smoke ahead so the fireman may quickly reach NOZZLE a heart of a fire.

★

Besides the RIEPLING UNIVERSAL NOZZLE characteristics shown in the photos on this page there is the combination use of FOG and SOLID STREAM TOGETHER; partially opening the main valve carries the fog with the solid stream.

Designed to meet specifications for either straight stream or fog nozzles offering advantages found in both types as well as combinations of both.

All brass construction. Finely polished finish. Available for 1", 1½", and 2½" hose. Always specify thread required.

★

The Riepling UNIVERSAL NOZZLE has been developed during the past five years to give the fire service a truly universal nozzle with a wide variety of water characteristics eliminating the necessity, inconvenience, and expense of carrying a variety of spray tips, nozzles, etc., each for use on certain type fires.

The fog discharge is variable in size from only one foot in diameter and one G. P. M. to a complete curtain of approximately thirty feet in diameter and 52 G. P. M. with perfect fog at all degrees on 90 to 130 lbs. nozzle pressure.

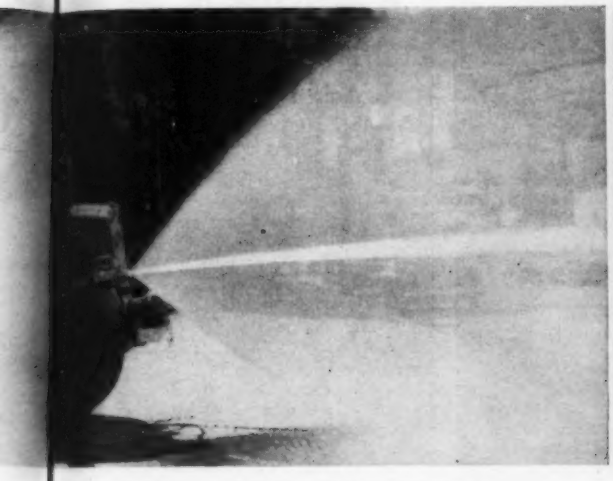
The Riepling

Much has been said about the proper sequence of operation of the fog and solid stream, but this is the first nozzle to eliminate the objection through such a variance of combinations. The fog opens at the smallest point (1°) and works through all phases to the 130° watercurtain, with the solid stream available at any stage of the fog sequence in conjunction or separately. Never does the opening discharge cause impaired vision or severe water damage.

The complete selection of fog degree from shutoff to water curtain is available within one complete

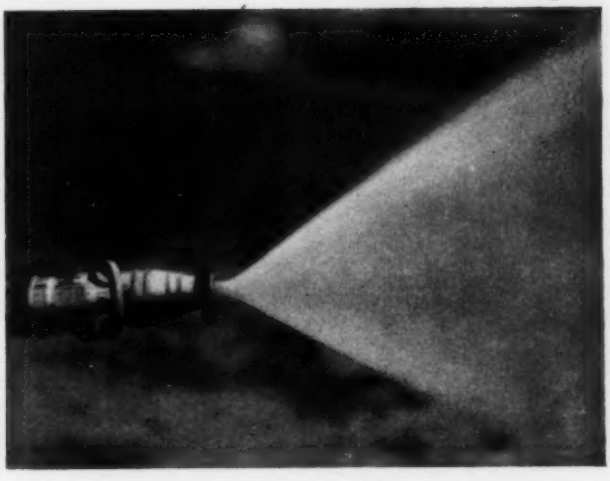
One Nozzle · Four Stream Selections · Fogs on

OZZWITH CORRECT STREAM FOR EVERY FIRE



SOLID STREAM and WATER CURTAIN

Under water curtain protection of the RIEPLING UNIVERSAL NOZZLE a fireman can extinguish the center of a blaze with the solid stream.



FOG (any volume)

The excellent fog characteristics of the RIEPLING UNIVERSAL NOZZLE are produced by the swirling hourglass of water in front of the nozzle.

UNIVERSAL NOZZLE

Manufactured By

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turn of the adjustable barrel which is always free operating.

The RIEPLING UNIVERSAL NOZZLE employs a unique sealing member, which does not leak. Packing glands are eliminated. Individual shutoffs on straight stream and fog. Fog stream opens at smallest point, widening into full water curtain.

The RIEPLING UNIVERSAL NOZZLE users include
U. S. COAST GUARD VESSELS
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U. S. ARMY AIR FIELDS

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MODERN FIRE FIGHTING
forerunner of mechanized warfare

Has it ever occurred to you that Fire Departments here in the U. S. A. originated the idea of mechanized warfare?

Fire Chiefs early saw the advantage of speed...getting to the scene of action faster... increasing personal efficiency through the use of pumpers...stepped-up hose pressures...aerial ladders... turret nozzles.

Throughout this mechanization era, Eureka Fire Hose has been steadily improved in design and construction. Since its introduction in 1875, Eureka has continually held recognition as the most trustworthy fire hose obtainable.

EUREKA

"For greater protection to life and property"

EUREKA FIRE HOSE

Division of United States Rubber Company

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der pipes; and for nozzle pressure of 70 pounds, it would give 26 pounds friction loss per 100 feet. As the single stretch up to the pipe would probably be but 100 feet in length, 26 pounds friction loss would not be too serious. Of course, the 3-inch line would best be fed by parallel lines of 2½-inch or 3-inch.

The weight and cumbersomeness of 3½, 4 and 4½-inch hose makes them less desirable than the 3-inch, even though the friction loss in the larger sizes be less than in 3-inch.

Acid Forming on Hose

To the Editor:

When I was at a fire school this past summer, I heard a discussion about acid forming in hose, but because the subject was not considered of much importance, it was passed up without a whole lot of comment. What is your opinion?

M.F.T.

Answer: Where the lining of hose is manufactured in such a manner as to leave an excess of sulphur the sulphur apparently combines with oxygen and is absorbed by any water which may be present, and in this manner creates a weak sulphuric acid solution. If this action takes place on the outer side of the lining or if it occurs on the inner side of the lining and the lining has been punctured or cracked sufficiently to permit the water to seep outward to the jacket, damage of the jacket may occur from the acid, the presence of which may be indicated by the use of litmus paper tests. The least trace of sulphuric acid in hose jacket will destroy the strength of the jacket.

Igniting of Gasoline Vapors

To the Eidtor:

In reading a recent issue of FIRE ENGINEERING, I came across an article that interested me. It is headed "Gasoline — Cigarette — $100,000 Loss".

It goes on to state that while the driver was backing his truck, he ran into a pillar and damaged the tank on the truck. He got out of the truck with a lighted cigarette in his hand, and an explosion and fire followed.

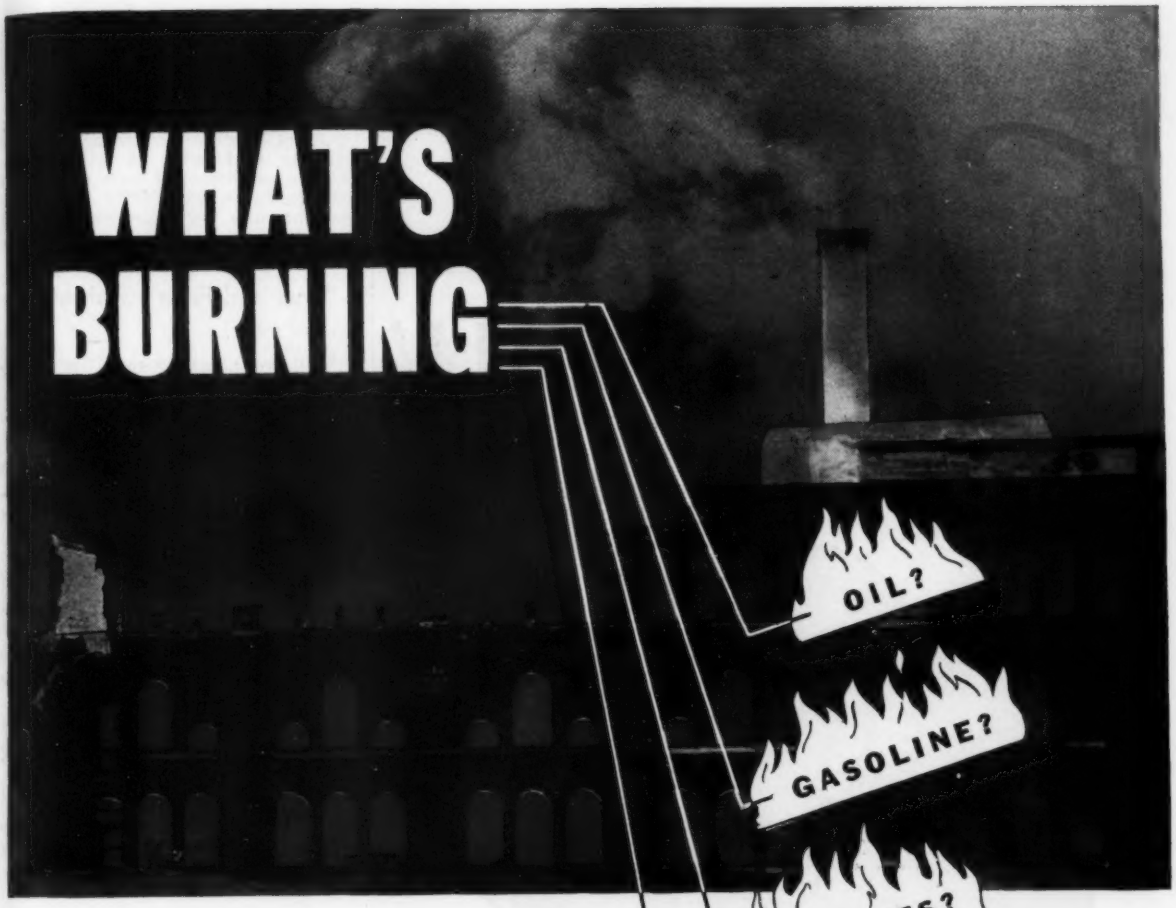
In your opinion, can a cigarette cause gasoline to explode?

I have attended a petroleum fire control technique training program in Santa Fe Springs, Cal. The course was sponsored by the Los Angeles County Fire Department. A laboratory demonstration was held by the Union Oil Company. The company represented in conducting a test showed that a cigarette could not ignite even the vapor of gasoline.

J.F.O.

Answer: We have been unable to secure any specific information on the ability of lighted cigarettes to ignite gasoline fumes.

At a recent meeting of a committee in New York, representing the dry goods



National Foam quickly and efficiently extinguishes these hazardous fires.

For many years, National Foam has been acknowledged by large oil refineries and, more recently, by the U. S. Navy as the effectual fire extinguisher to combat serious oil, gasoline and similar perilous fires.

National Foam quickly produces a thick, airtight blanket of tiny cohesive bubbles, shutting out the oxygen supply and extinguishing the fire. The foam is not dissipated by drafts or wind, but remains intact to prevent flashbacks.

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National Foam System has equipment especially designed for use of Fire Departments to meet all types of foam fire fighting requirements.

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Experienced Engineers will be glad to make recommendations indicating type of Foam and Equipment best suited to your individual needs.

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SENSIBLE LUG COUPLINGS

Sensible in every sense of the word!
Sensible because they cannot catch in ladders, etc.
Sensible lugs are designed to glide *over* obstacles.
Sensible because they cannot wear or mar stacked hose.
Sensible because they are easier to couple up.
Sensible because they are made of sturdy brass.

We have for over 50 years believed nothing is too good for the fire service. We make and sell nothing but the finest fire equipment money can buy.

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trade and other groups interested in flammable garments, one of the research chemists present stated that it is possible to ignite gas with a lighted cigarette if there is even the tiniest flame on the cigarette. This could possibly be produced by drawing vigorously on the cigarette, or blowing on it. However, as commonly smoked, it is quite likely that no flame would ever be created, and therefore the cigarette could not ignite gasoline fumes.

"True and False" Statements

To the Editor:

Will you please answer the following "true and false" questions:

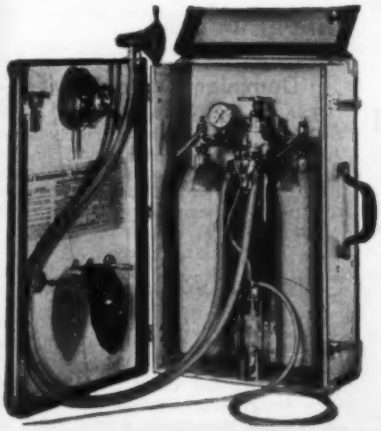
1. Frozen dynamite is very dangerous.
2. Nitrogen Peroxide is a harmless gas produced in projection booth fires.
3. Great amount of radiant heat will pass through glass which is transparent to light waves.
4. Any material in which combustion will occur is subject to spontaneous combustion.
5. There are other readily available materials which have a greater heat absorption power than water.
6. Absorption of heat is the most practical method of extinguishing nearly all classes of fires.
7. Heat is more readily transferred by conduction in liquids than in solids.
8. Solid brick walls may be very poor fire walls.
9. Where a floor of a room is involved with fire the ceiling should be used as a deflector for the stream.
10. The Bureau of Mines has approved several types of gas masks for use in fire fighting.
11. In a burning building the hazard from carbon monoxide is much greater below the ground level.
12. Sugar dust is not easily ignited.
13. In a brush fire the crew should start working on the side from which the wind blows.
14. In oil fires, full containers are less dangerous than those which are only partly filled.
15. The same rules will be found to hold good in fighting fires involving either oil or gasoline.
16. A water curtain is a covering to protect floors from damage by sprinkler systems.
17. Exposure of hose to high temperature results in vulcanization.
18. A chisel is usually used for opening sidewalk doors which are fastened beneath.
19. Ventilation of a building should always be completed by the time lines are laid and ready to operate.
20. Ventilation adds to the probability of so called hot air explosion.
21. It is the object of salvage to hold water to the upper floors of a

The Oldest Fire Company Believes in Keeping UP-TO-DATE

Haddonfield's original pumper

Part of equipment and personnel of Haddon Fire Co. No. 1, with Chief Jonathan F. Cox in center behind E & J Unit.

with the **E & J RESUSCITATOR INHALATOR and ASPIRATOR**



Established in 1764, and now in its 182nd year, Haddon Fire Co. No. 1 of Haddonfield, N. J., lays claim to being America's oldest fire company in continuous service.

This long experience, covering practically the whole span of fire fighting history in this country, has taught one important thing—that it pays to keep up-to-date with the best equipment money can buy.

It is significant, therefore, that Haddon Co. No. 1, under the progressive leadership of Chief Jonathan F. Cox, now uses an E & J Resuscitator, Inhalator and Aspirator—purchased in August, 1944.

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Because it is made from the finest available materials, and with the exacting care that has been the watchword of the company's craftsmen for three-quarters of a century, GOODALL Cotton Rubber Lined Fire Hose assures the greatest possible resistance to excessive pressures, punctures, crushing and other fire-fighting hazards. Single Jacket available in sizes 1½" to 2½", with guaranteed test pressure of 300 lbs. Double Jacket, in sizes 1½" to 3", with guaranteed test pressure of 400 lbs. Furnished with or without Underwriters' label.

GOODALL FIREMEN'S BOOTS

Comfortable long-wearing boots with wood "Ladder Shanks" to reinforce arches. Wide guards at shank, for protection against punctures. Black slip-proof soles. Inside and outside gum knee patch.

GOODALL Style 19 FIRE COAT

The firemen's favorite. Durable dull finish black rubber. Lightweight, "roomy," comfortable. Corduroy band collar, square shoulders, strap-and-buckle on sleeves. Length, 46". Sizes, 34 to 46.

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Goodall Rubber Co. of Calif. - Goodall Rubber Co. of Texas

Factory — Trenton, N. J. Established 1870

burning building insofar as it is possible.

22. Hose streams should be directed above the base of the fire.

23. A greater damage or fire loss is due to damage from smoke and water.

R.H.

Answer: The answers to your questions are as follows:

1. T; 2. F; 3. F; 4. F; 5. F.

6. F. Smothering of a fire is the most practical method in fires involving flammable liquids, such as petroleum products. Smothering may be accomplished by application of fog, carbon dioxide or vaporizing chemicals.

7. F; 8. T.

9. F. Less water damage will be done by direct application of small stream.

10. T.

11. T. While carbon monoxide is lighter than air and will normally rise, is is rarely, if ever, found in its pure state of a fire. It is usually mixed with other gases, and the combination of these gases is usually heavier than air. In such cases hazard of carbon monoxide would be greater at the ground level than higher up in the building.

12. F; 13. F; 14. T; 15. F; 16. F; 17. T.

18. T. A combination chisel and punch is usually used for opening sidewalk doors on which it is necessary to shear off the bolt heads or rivet heads. But sidewalk doors may be opened by other methods as well.

19. F.

20. This would be answered "True" if ventilation weren't properly performed, that is, if the lower windows and doors were opened before higher points of the building were first opened. On the other hand, if ventilation is properly performed, the so-called hot air explosion is more apt to be avoided than induced by ventilation.

21. F; 22. F.

23. F. This question is too general in nature to warrant a precise answer. In small fires the water and smoke damage is frequently greater than fire damage. On the other hand, in large fires, including conflagrations, the fire damage is by far the greater.

Dominion Chiefs to Meet

The Dominion Association of Fire Chiefs will hold their Thirty-Seventh Annual Convention in the city of Windsor, Ontario, on August 14-17 inclusive. Reservations should be made through the acting secretary-treasurer, Chief Allan H. Clark, Lakefield, Ont.

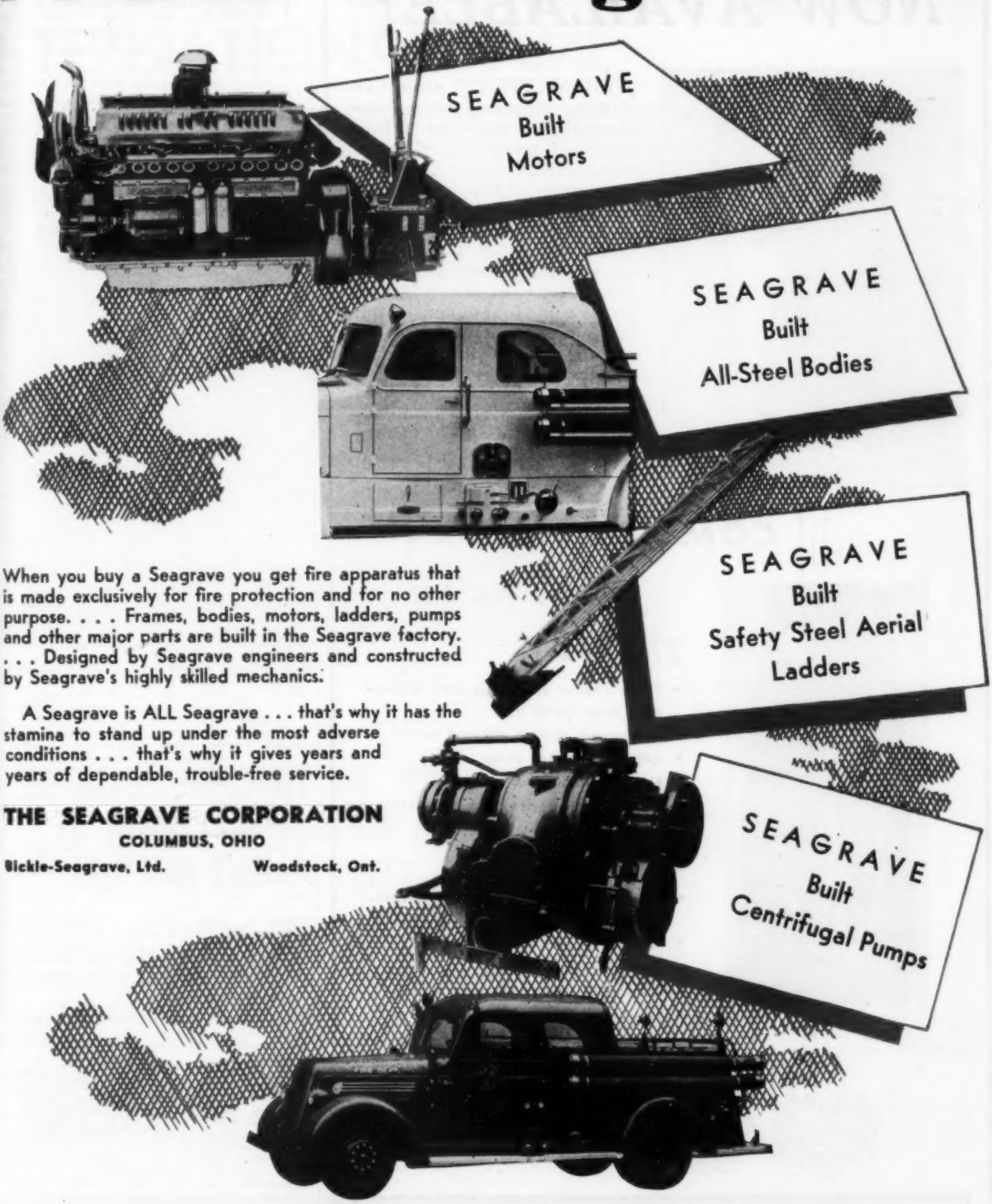
C. N. Pinn Appointed Chief at Dallas

Battalion Chief C. N. Pinn has been appointed Chief of the Dallas, Tex., Fire Department, and Chief L. M. Funk has been designated battalion chief. A similar switch was made a few years ago, when Sid. Hansen was Chief.

M. R. Reimers Elected Assistant Chief at McCamey, Tex.

Fire Marshal Malcolm R. Reimers has been elected Assistant Chief of the McCamey, Texas Fire Department.

ALL Seagrave



When you buy a Seagrave you get fire apparatus that is made exclusively for fire protection and for no other purpose. . . . Frames, bodies, motors, ladders, pumps and other major parts are built in the Seagrave factory. . . . Designed by Seagrave engineers and constructed by Seagrave's highly skilled mechanics.

A Seagrave is ALL Seagrave . . . that's why it has the stamina to stand up under the most adverse conditions . . . that's why it gives years and years of dependable, trouble-free service.

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COLUMBUS, OHIO
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SEAGRAVE

THE GREATEST NAME IN FIRE APPARATUS

Kindly mention FIRE ENGINEERING *when writing advertisers*

PROTECTIVE CLOTHING
NOW AVAILABLE!

MIDWESTERN protective clothing is manufactured exclusively for professional firemen and policemen all over America. A great part of this protective clothing is used by government plants and is becoming more popular each year because of the rugged, extra durable materials used. The needs of our fighting forces come first of course, but the same fine quality is available for you. Write your Midwestern representative for complete information and samples of material now available or write the factory direct.

COMBINATION SUIT

OUTFIT No. 101

The Coat:

- Either rubber or canvas with detachable wool lining
- Reinforced, double stitched seams
- Adjustable collar strap
- Flexible elastic inner sleeve
- Lining attached with quick snap buttons

The Pants:

- Either rubber or canvas with detachable wool lining
- Reinforced adjustable belt
- Special Vanitex fabrics
- Reinforced crotch for pole sliding
- Two side and one hip pocket

FIREMEN'S BOOTS AVAILABLE

Regular Firemen's Boots available ¼ length, reinforced instep, felt linings. New synthetic rubber, not reclaimed.

MIDWESTERN MFG. CO.
MACKINAW, ILLINOIS

What's Burning

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of May, 1945. These figures compiled from the telegraphic reports, are based on estimates made at the time and are subject to later investigation and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent losses in thousands of dollars.

Month Ending May 31	Losses in Thousands of Dollars
Calmar, Alta.—Church, six stores and a house destroyed	170
Bakersfield, Cal.—Parker Well No. 3 of Western Gulf Oil Co., Fruitvale field, destroyed	50
Brazil, Ind.—Junior High School bldg. destroyed	135
Dayton, Ohio—Fourth and fifth floors of Kuhns Bldg., occupied by U. S. Army Signal Corps offices and stock rooms of H. L. Greene Co., a variety store, damaged	60
Minneapolis, Minn. — Warehouse, factory and offices of Northern Wood Products Co., and all coal sheds of adj. Midwest Coal Co. destroyed	125
Clovis, N. M. — Laughlin Egg Drying Plant destroyed	80
Phoenix, Ariz.—Schenley Distilleries, Inc., damaged	125
Grand Island, Neb.—Fairmont Creamery Co. destroyed	80
Milwaukee, Wis.—Bldg. occupied by beauty shop, barber shop, drug store, doctors' offices and apartments, damaged	50
Portland, Me.—Graymore Hotel damaged	50
Sandusky, Ohio—Plant of Lake Erie Canning Co. destroyed	80
Pittsburgh, Pa.—Section of Herr's Island Stockyards and Pittsburgh Melting Co. destroyed	80
Norfolk, Va.—National Wine Distributors damaged	50
Los Angeles, Cal.—California State Guard Armory destroyed	50
Paris, Ill. — Masonic temple destroyed; First Christian Church, across street damaged	80
Newport, R. I.—Covell Bldg. damaged	70
Grand Rapids, Mich. — Plant of Grand Rapids Woodcraft Corp. damaged	80
Minneapolis, Minn.—Sanitary Meat & Grocery Co. destroyed	80
Dallas, Ore.—Irish-Warner grocery store destroyed	60
Los Angeles, Cal.—Bekin Van & Storage Co. warehouse damaged	50
Bremerton, Wash.—Tower theatre damaged	60
Fort Kent, Me.—Acadia Hotel garage, three dwellings and several stores and business establishments destroyed	450
Boston, Mass.—Metropolitan Coal Co., Jamaica Plain, destroyed	225
Cleveland, Miss.—Offices of Mississippi Power & Light Co. and the W. H. Bobb Drug Co., destroyed; Ward Lumber Co., Kelso's dry cleaning plant and another warehouse damaged	60
Clifton, N. J.—Bright Star Battery Co. plant damaged	450
Galion, Ohio—Hotel Talbott damaged	50
Seattle, Wash.—Good Will Industrial plant warehouse destroyed	80
Los Angeles, Cal.—Peterson Mfg. Co. plant damaged	80
Los Angeles, Cal.—The California Hand Prints Co. and Pacific Textile Co. damaged	125
Glendale, Cal.—The Modern Refrigerator Co. damaged	125
Clayville, N. Y.—Clayville Foundry, castings manufacturer, destroyed	80
Little Falls, N. Y.—B. Feldman & Sons, Inc., furniture store damaged	80
Clinchport, Va.—Two dept. stores, two dwellings, four warehouses and one storeroom destroyed	80
Portland, Ore.—Lumber Manufacturers destroyed	115
Emeryville, Cal.—Bacon Vulvanizer Mfg. Co. destroyed	170
Boston, Mass.—L. E. Mason Co., Hyde Park, destroyed	50
Columbus, Ohio—Bomb finishing plant of the Blaw-Knox Co.	800
St. Johns, Que.—Church St. Luc damaged	65
Gardena Ca[1] –Gardena Theatre damaged.	50

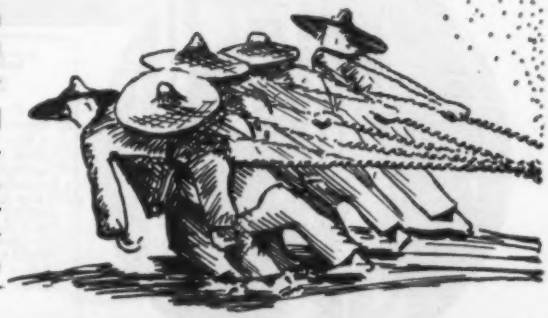
Link EMERGENCY RADIO *has earned* INTERNATIONAL FAME ☆

GENERALISSIMO CHIANG KAI-SHEK ON TOUR OF INSPECTION. Left: LINK TYPE 50-UFS FM MAIN STATION UNIT

WHEREVER MEN HAVE THE WILL TO WORK TOGETHER FOR A JUST AND LASTING PEACE

You'll find Link Emergency Radio Communication Units handling the vital intelligence. Link engineering has always designed and built for emergency purposes.

Whenever there is need for administrative or tactical use of emergency radio, Link is the acknowledged pacemaker. . . . In use by Police, Sheriff, Fire, Forestry, Railway, Public Utility, Military, Government and other Emergency Services around the world.



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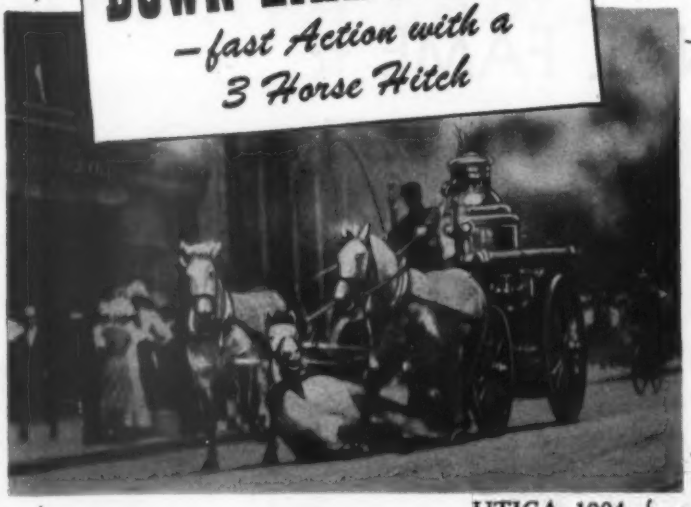
PREFERRED *FM* RADIO COMMUNICATION EQUIPMENT

MANUFACTURED UNDER LICENSE OF THE ARMSTRONG PHASE SHIFT MODULATION PATENTS

DOWN LIKE A SHOT!
—fast Action with a 3 Horse Hitch



UTICA, 1904

This old photo, taken in Utica over 40 years ago, shows a dramatic moment when the center fire horse stumbled and fell while galloping down the main street. It was up in a flash, however, and continued the run.

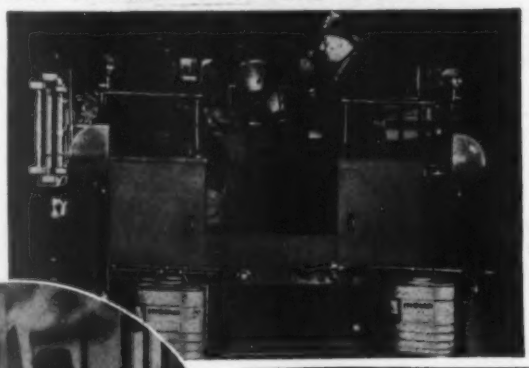
INDIAN FIRE PUMPS

Never Fall Down on the Job!

UTICA FIRE DEPT. NOW HAS *INDIANS* AS STANDARD EQUIPMENT

(*At right*) Utica fire truck is one of the many which carry INDIAN FIRE PUMPS for fighting all types of smaller fires.

(*Below*) Utica firemen use INDIAN FIRE PUMPS to extinguish a fire in a home. Clear water causes no damage to clothing or furnishings.



"GREAT PIECE OF EQUIPMENT"

D. B. Smith & Co.
Utica, N. Y.

Our INDIAN FIRE PUMPS again saved a building. Fire got a good start in the dry wood shingled roof of a house 5 miles from our station. We put up a ladder and 2 men went on the roof with their INDIANS and 2 others up in the attic with INDIANS. We had it out in a hurry. The INDIAN is a great piece of equipment.

Chas. M. Levering,
Fire Chief
LaPlata Volunteer Fire Dept.

D. B. SMITH & CO. 406 Main St. UTICA 2, N. Y.

PACIFIC COAST BRANCHES:
Hercules Equipment & Rubber Co., 435 Brannan St., San Francisco, Cal.
Roy G. Davis Co., 617 E. Third St., Los Angeles 13, Cal.
Carne-Conwhit Co., 520 S.W. Pine St., Portland 4, Oregon
The Conwhit Co., Klamath Falls Oregon
Mill & Mine Supply, 2700 4th Ave. So., Seattle, Wash.

Hemet, Cal.—Idyllwild Inn, resort in San Jacinto Mountains, destroyed.....
Shreveport, La.—Brewster Co. war plant, Argus industrial section, destroyed.....
Newburyport, Mass.—J. J. Newberry Co. bldg. destroyed.....
Pontiac, Mich.—Pythian bldg., occupied by jewelry and shoe store, offices, and lodge rooms destroyed.....
Jackson, Miss.—Three bldgs. of Valley Mills Co. destroyed.....
Kingsport, Tenn.—Bldg. occupied by woodworking plants of Hemingway-Memphis Company, Craftsman Wood Carvers and Limeberry Cabinet Co. destroyed.....
Halifax, N. S.—Peoples Credit Jewelers, Dallairds Women's Wear and several other establishments, damaged; V-E Day rioters .....
Menominee, Mich.—Main plant, shipping bldg. and office bldg. of Bresnahan Lumber Co., Inc., destroyed.....
New Bedford, Mass.—Bristol Arena damaged .....
Lafayette, Ind.—Automobile shop and garage of Clinton Anderson destroyed.....
New Orleans, La.—Federico Baking Co. destroyed; adj. A. & P. Food store and an F. W. Woolworth & Co. store damaged .....
Springfield, Ohio—Cappel House Furnishings Co. damaged.....
Bay City, Tex.—Shoe shop, a cleaning and pressing establishment, a grocery store and a cafe destroyed.....
Uniontown, Ala.—Uniontown Hotel, adj. Uniontown Baptist Church and barn of A. P. Woodfin destroyed.....
Cambridge, Ida.—Cambridge Theatre damaged .....
Kalamazoo, Mich.—Sutherland Paper Co. damaged .....
Bartlett, Ore.—Norris Saw Mill destroyed
Woonsocket, R. I.—U. S. Rubber Co., Woonsocket Ganetting Co. and Ray Cotton Company destroyed.....
Grand Coulee, Wash.—Group tavern damaged .....

Fire Losses in U. S. Higher Tha a Year Ago

Fire losses in April in the United States were estimated at $37,950,000, an increase of $3,204,000 or nine per cen over losses in April, 1944, it was recently announced by W. E. Mallalieu, General Manager of the National Board of Fire Underwriters. Last month's losses were the highest recorded for any April since 1932, when they totalled $43,82 000. The Board's estimates are base on incurred losses reported by member companies, plus an allowance for unreported and uninsured losses.

However, the April losses were $2,926,000 or 7 per cent below losses of $40,876,000 reported in March. Losses in the twelve months ended with April 30, are estimated at $438,004,000 as compared with $396,554,000 for the year ending with April, 1944.

Gold Medals Awarded to Press and Radio

The "Christian Science Monitor Boston, Mass., and Radio Station WL of Chicago, Ill., have been selected a national winners of the $500 gold med als offered in the fourth annual Gol Medal Awards competitions for outstanding public service in the field of fire prevention during 1944, it was recently announced by the National Board of Fire Underwriters, sponsor of th Awards.

The Committee of Judges which selected the winners was composed of Chief Samuel J. Pope, President, International Association of Fire Chiefs; Herbert J. Stack, Director, Center for Safety Education, New York University; and Mark Woods, president, American Broadcasting Company.

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MOTOR FIRE APPARATUS

Leadership

Because the Traditional Excellence of New England Craftsmanship is apparent in every piece of apparatus bearing the name plate of—

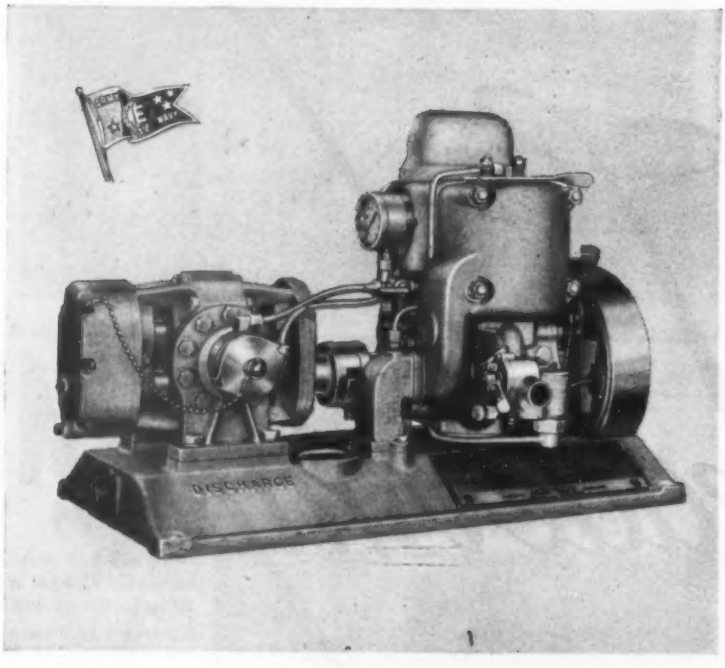
MAXIM MOTOR COMPANY MAXIM MIDDLEBORO, MASS.

Established 1888

MAXIM MOTOR COMPANY MIDDLEBORO, MASS.

It will help you if you will mention FIRE ENGINEERING *when writing advertisers*

TYPE "Y"
Portable Pumper



While the major part of our manufacturing effort still is confined to production for the Navy, we once again are able to produce a limited quantity of our highly specialized fire-fighting Type "Y" Portable Pumpers for the forestry service, industrial plants and commercial shipping.

For weight and size, Pacific Marine Type "Y" is the most powerful portable pumper yet built. Base, 24 x 12 inches; height, 13 inches; net weight complete, ready to operate, 70 pounds.

CAPACITY

Pressure	100	125	150	175	200	225
Gallons per Minute	63	59	53	46	40	20

Manufactured by the

FIRE-FIGHTING EQUIPMENT DIVISION *of the*

PACIFIC MARINE SUPPLY COMPANY

SEATTLE, Washington

New Indiana Fire Wage Bill

Indiana's new Governor Gatos h signed a number of new bills approve in the last session of the state legislatur perhaps the most important, being Se ate Bill No. 238, which establishes th minimum salaries of Chiefs of Fire an Police Departments in first, secon third, fourth and fifth class cities of th state. A proviso, affecting cities of th first class, of which Indianapolis is th only one limits the salaries of the chief of police and fire to not less than $8,00 per annum. The minimum for cities o the second class is $4500; for the thir class $3500; fourth class, $3,000 for th fifth class, having a population of no less than 7,000 or more than 10,000, th minimum is set at $2600.

In cities of this class having a popula tion of not less than 5,000 or more tha 7,000 the base is $1500; in cities of thi class having a population of not les than 1,000 and not more than 5,000 in habitants, the minimum salaries shall b not less than $1,000 per annum.

The act will apply to only those citie wherein the chiefs are required to devot their full time to the performance o their respective duties. In cities where there exists a volunteer fire departmen or where the functions of the chief o the fire department are performed by person holding any other public offic or as a part time job, the salaries se forth in the Bill for the chiefs shall b fixed and established in the manner a now provided by law. The Act is no to be construed or interpreted as creat ing offices of chiefs of fire or police i any city wherein there does not now exist a chief of fire or police, but th provisions of the Act shall apply i such cities when and if such offices ar created.

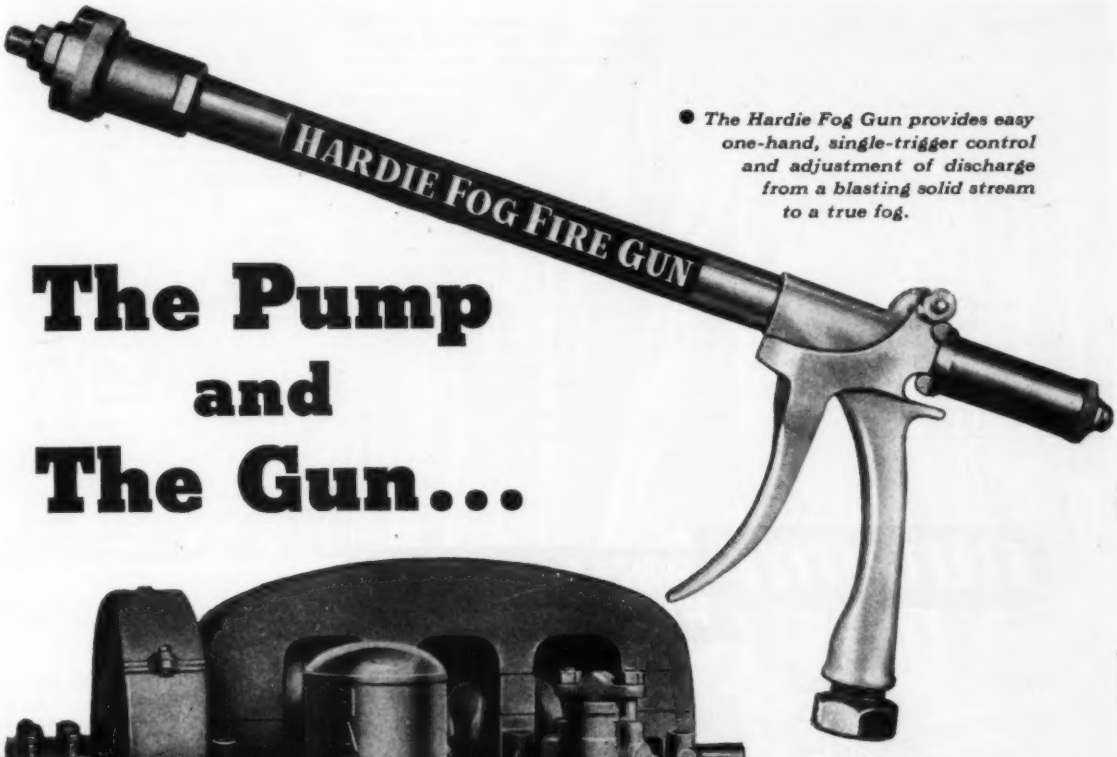
Chicago Enforces Code

Following a complaint by the Chicag Fire Prevention Bureau that 15 specific violations of the fire ordinance had bee found there, police closed the plant o Eversharp, Inc., pencil and fountain pe manufacturers in that city.

Huge quantities of a plastic with a nitrocelulose base were alleged to have been stored in the building, where 1,80 people were employed.

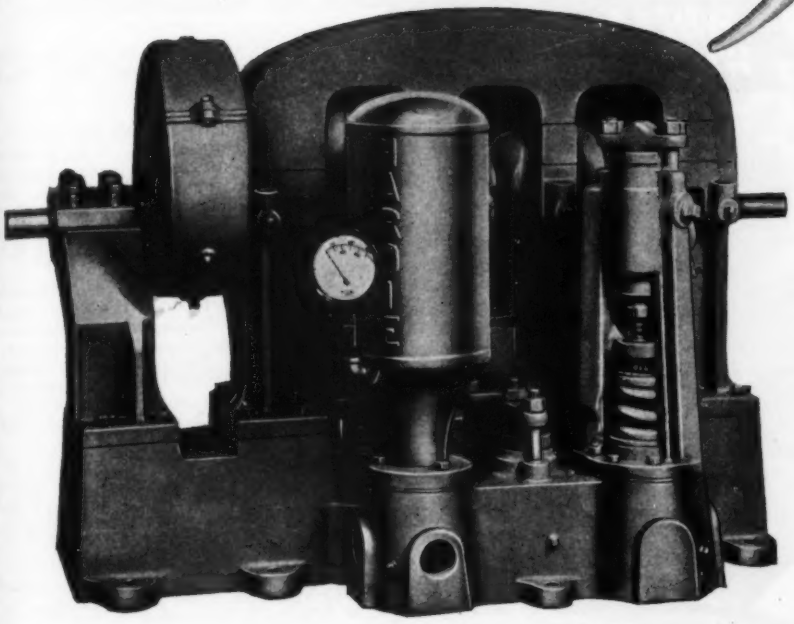
The company had previously been ordered not to store more than 25 lbs of the material in one place at a time and to install fireproof storage vaults electric switches and other safety equip ment but the recommendations had not been followed out. In February, 1944 Eversharp was fined $200 for failure t remove completed quantities of nitro celulose in the plant to places where the material would not be a fire hazard. The Navy, it is reported, later cancelled its contracts with the firm for air-craft instruments, and the previous December when the plant was reported partially engaged in war work, the Army com plained that government property was imperiled. Later it is reported to have canceled its contracts.

Inspection by fire department officials of another of the company's assembly plants in White Plains, N. Y. disclosed that while flammable materials were in evidence, the local fire prevention ordi nances covering storage and handling of such combustibles had been complied with.



● *The Hardie Fog Gun provides easy one-hand, single-trigger control and adjustment of discharge from a blasting solid stream to a true fog.*

The Pump and The Gun...



● Hardie pumps for Fog Fire Fighters are available in two sizes. The Hardie L C X A (at left) delivers 60 gallons per minute at 800 P.S.I. at 130 R.P.M. The Hardie XCXX delivers 35 gallons at 800 P.S.I. at 118 R.P.M.

● Efficiency of any Fog Fire Fighter depends squarely upon the pump and the gun. Hardie offers perfected, proved quality in these two basic factors. Hardie pumps give you 800 P.S.I. for long, sustained periods without excessive wear of operating parts. The Hardie Fog Gun delivers a true fog—the finely atomized spray that makes this new method of fire control most successful.

Hardie pumps and guns are embodied in the Fog Fire Trucks built by leading manufacturers of fire control equipment. Specify a Hardie pump and gun when you buy a new truck or convert an old one into a Fog Fire Fighter. The Hardie Mfg. Company, Hudson, Michigan; Los Angeles, California; Portland, Oregon. Canadian Distributor—C. W. Lewis, Grimsby, Ont.

★H★A★R★D★I★E

High Pressure **PUMPS AND FOG GUNS**

for Fog Fire Fighters

Persons in the News

Chief Noble Honored

Friends of Chief William J. Noble, New Britain, Ct., presented him with a $1,000 war bond in honor of his 50th year as head of the fire department. Fire officials, state and county political and civic leaders and representatives of business and industry attended the presentation dinner given Chief Noble. State Police Commissioner Edward J. Hickey was toastmaster.

George Herman Fischer, for 25 years Chief of the Orangeburg, N. C., Fire Department and a former president of the South Carolina Firemen's Association, died March 17, 1945, following a heart attack. He became chief of the department in 1920 and served continually until his death. He leaves a widow, Mrs. Veronica Brunson Fischer; a son, Lieut. Geo. H. Fischer, Jr., now overseas; a daughter, Miss Marjorie Fischer, and his mother, Mrs. Evelyn Fischer, of White Rock, N. C.

D. G. SPENCER

Chief Allen H. Clark, Lakefield, Ont., Canada, has been appointed by the Board of Directors of the Dominion Association of Fire Chiefs to fill the post of secretary-treasurer of the Association pending a formal election to be held at the 1945 conference of the organization. He succeeds ex-chief James Armstrong of Kingston, who resigned earlier in the year.

S. Guy Lukens, assessor of Placer County, Cal., has been elected chief of Auburn H L Co., No. 1, Auburn, Cal., Fire Department, for the 40th time.

Norman J. Smith has been installed as president and Harold A. Smith, fire chief, of the North Amherst Fire Co., North Amherst, N. Y.

Frank B. Kelly, 61, senior battalion chief, Rochester Fire Department, has been named Deputy Chief to succeed Alexander J. Sutherland, who retired Dec. 3 upon reaching the age limit. Chief Kelly was appointed fireman July 16, 1913, lieutenant, Apr. 1, 1921; Captain, Feb. 15, 1926, and battalion chief, Sept. 16, 1930. (Thanks Tom McCarthy).

Battalion Chief Elmer M. Cain of the Cleveland, Ohio., Fire Department has been appointed Second Assistant Chief by Safety Director Frank D. Celebrezze. He assumes the post left vacant by the resignation of Joseph F. Sweeney. Chief Cain joined the department in 1923; was made battalion chief in 1938.

Elmer F. Ulrich has been elected Fire Commissioner of Grosse Point Park, Mich.

M. F. Gunderson, until recently Fire Chief of Oelwein, Ia., has been awarded active life membership in the International Association of Fire Chiefs. He has been prominent in the Missouri Valley Association of Fire Chiefs, a division of the International.

R. Marshall Potts, city fire inspector and former chief of the fire department, South Bend, Ind., who retired after more than 25 years active service has been appointed a state fire inspector by Indiana State Fire Marshal Carter Bowser who recently left the post of Fire Chief of Fort Wayne to accept his appointment at the hands of Governor Gates.

Robert Miller named Chief, Yorktown, N. Y., Fire Department. Frank Cuatt 1st Asst., Kenneth Weyant, 2nd Asst.

Paul Kremer appointed new Chief, Dyersville, Ia., Fire Department.

Ernest Hayes elected Chief, Hastings, Mich., Fire Department.

Harold Atwood elected Chief. Newark, N. Y., Fire Department.

Chris Obrecht elected Chief, Black Earth, Wis., Fire Department.

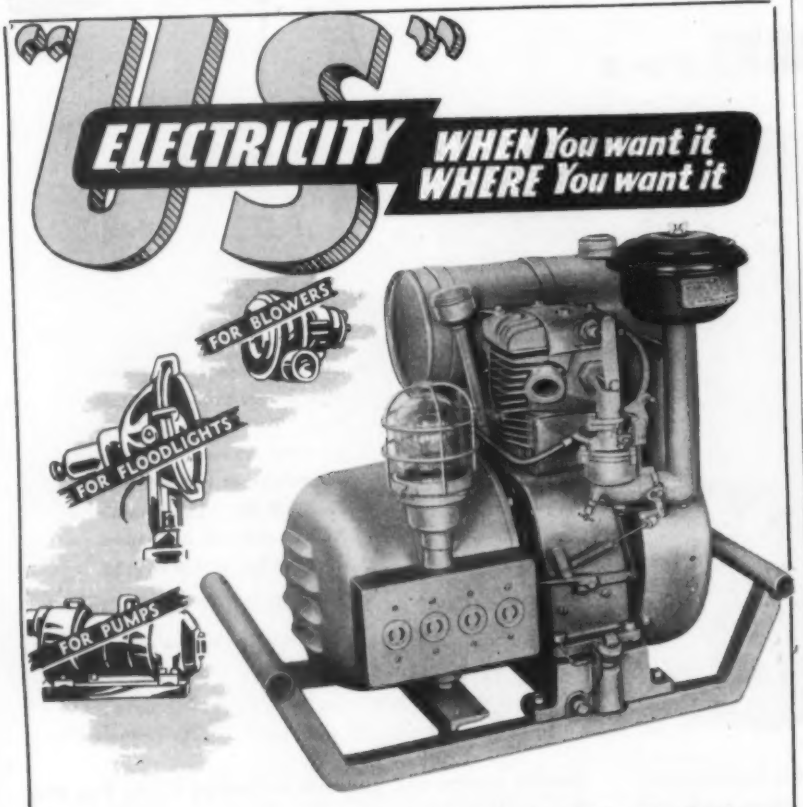
Darrell Barron elected Chief, White, S. Dak., Fire Department.

Joseph Bott, Chief, N. Patchogue, Suffolk Co. Fire Department, elected president Brookhaven Town Volunteer Firemen's Association.

Edgar H. Rose is new Chief of the new Defreestville, N. Y., Volunteer Fire Company.

Fred W. Goeglein appointed Chief, Fort Wayne, Ind., to succeed Carter Bowser, now Indiana State Fire Marshal.

"US" ELECTRICITY WHEN You want it WHERE You want it



Built to exacting requirements—to fire department specifications. . . . Designed to stand up under the hard usage and difficult conditions a Fire Department Portable has to meet! In service with leading fire departments, these rugged 1500 watt Units have proved themselves capable of meeting every emergency.

Dependable. Quick-starting 4-cycle engine. Positive lubrication.

Start it and forget it! Automatic voltage regulation under all loads. No adjusting necessary. No fussing to mix gasoline and oil.

Compact. An easy load for two men.

Larger and smaller sizes available. Write for further information.

UNITED STATES MOTORS CORPORATION

430 Nebraska Street **Oshkosh, Wisconsin**

ARMY E NAVY

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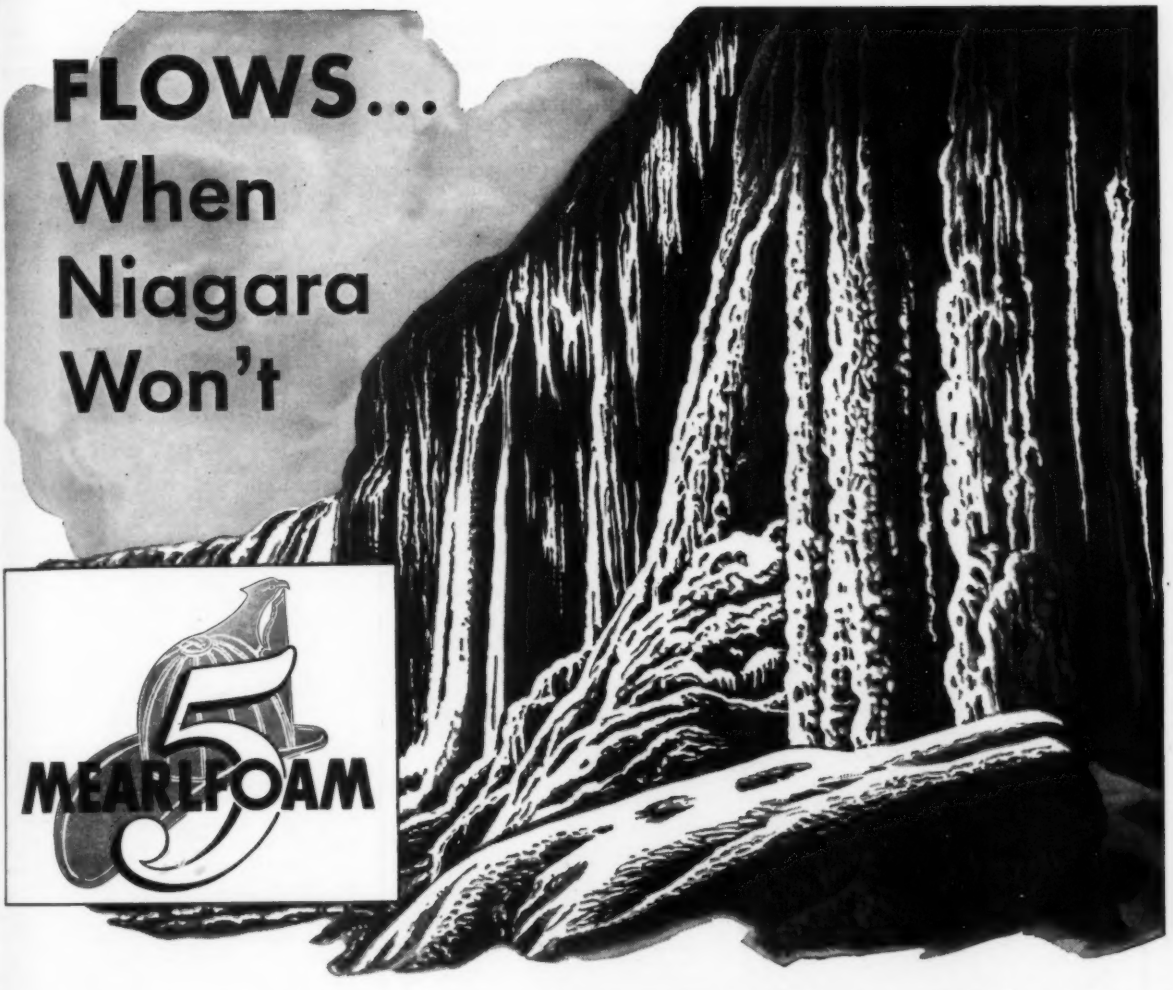
FLOWS... When Niagara Won't



WITH A COMFORTABLE margin of twenty degrees to spare, MEARLFOAM-5 the war-born, blended multi-protein, foaming agent can be depended upon to function at peak efficiency even when water is freezing solid. Calcium-chloride, of course, may be added to water as an anti-freeze . . . but the real point is that neither temperatures down to 12°F. nor the anti-freeze—in any way whatsoever impair the top-flight fire extinguishing performance of this live, long-lasting, blended multi-protein foam. And most important—*There is no gelling and no precipitation when the mercury nearly drops out of thermometer bulbs.*

The many unique and dependable properties of MEARLFOAM-5 are the sole reasons the U. S. Navy uses it extensively for preparedness . . . and for the quick extinguishment of raging gasoline and oil fires on shipboard and at shore bases. MEARLFOAM-5 is the veteran of many successful engagements, and one day will demonstrate to all—the super effectiveness of mechanical (air) foam as the most successful method for combatting gasoline and oil fires. MEARLFOAM-5, after putting fire out—*keeps it out* . . . totally eliminating the flashback hazard which in the past has taken such toll of lives and property.

MEARLFOAM-5 is a good-mixer—with any type of water: *sea water, fresh water, hard or soft water.* It works at maximum efficiency in any climate or atmospheric condition. Its performance is practically constant and invariable over a wide range of conditions. When split-seconds count—you can rely on MEARLFOAM-5 to put fire out fast—to keep fire out *permanently!* A one-page condensed data sheet detailing the unique properties of this war-born fire-fighting foam is now available on request.

Completely safe and non-corrosive—may be used with standard Mechanical Foam-Forming Equipment

FOAM ON FIRE OUT... Stays OUT!

THE MEARL CORPORATION
153 Waverly Place, New York 14, N.Y.

Following the recent death of Chief G. H. Fischer, the Orangeburg City Council, elected Clarence Fischer to fill the post on April 1st. The new chief has been with the department the past 22 years. He has attended several schools for the training of fire fighters.

John F. Newborne, first assistant, and T. T. Jeffords, second assistant, will continue in these positions.

Harry E. Foster, retired lieutenant of the Troy, N. Y. Fire Department, died at his residence February 6, 1945. He was appointed to the fire department April 3, 1917, and promoted to lieutenant in 1924. He retired on February 26, 1944. He served as instructor at the Troy fire school and was a member of several fire service and fraternal organizations. His son, Harold E. Foster, is a Lieutenant in the United Aircraft Fire Department.

Charles H. Taylor, 75, for five years chief of the Muncie (Ind.) Fire Department and a member of the organization for twenty-eight years, committed sucide at his home in Muncie. (Thanks W. B. C.).

Frederick J. Walz, 64, former chief of the Saugatuck, Mich., Fire Department, died following a fall on the icy pavement. He served in the Saugatuck volunteer department for many years; was made chief in 1933.

Edmund L. Meader, 89, at one time assistant chief of the Jamaica volunteer Fire Department, died at Central Queens, L. I. Y.M.C.A.

William D. Richards, 56, former chief of the Sierra Madre, Calif. fire department, died at his home in Sierra Madre.

Retirements and Promotions

Fire Chief Albert J. Dougherty has retired as chief of the Somerville, Mass., Fire Department. He is succeeded by Louis A. Spine, former first assistant chief. Otto Lechleitner, captain of Central H. & L. Co., was advanced to the post of assistant chief.

Elmer J. Ellison was elected chief of the Newark, Del., Fire Department.

Harry Callan, former fire chief of Youngstown, Ohio, has been appointed state fire marshal.

Lewis E. Shingledecker, safety director of the National Supply Co., Springfield, Ohio, has been renamed head of the Springfield Industrial Fire Chiefs' Association.

W. F. Biehl has been reelected chief of the Geddes, S. D., Fire Department for the twentieth consecutive year.

Julius S. Pfitzer has been re-elected chief of the Java Volunteer Fire Department, Java, S. D.

Herman Krause, who has served as assistant chief of the Ann Arbor, Mich., Fire Department, retired in January at the age of 63. He is replaced by E. C. Damman, 59, for the past 11 years a captain in the department. Chief Krause joined the department in 1914.

Omar Williamson has been named chief of the Clarinda, Ia., Fire Department to succeed Earl Newton, who retired.

The Town Board of Newburgh, Ind., has re-appointed Porter Brown chief of the fire department. He is also chief of police. (Thanks W. B. C.).

A Century of Service!

Assistant Chief W. C. Rueckert (left) and Captain William Fink of Portage, Wis., together have given their city over a century of loyal fire service. Actually, their records each show fifty-one years in the fire department. According to Rod A. Porter, Chief of the Department, both these smoke eaters are hale and hearty, albeit somewhat bashful when it comes to having their pictures taken. He reports he had to drag them to the photographers by main force. Chief Rueckert is also chief inspector of the department, and doing a right smart job, so he is.

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More About Fireboats

In our January, 1945, issue we answered a question from "N. M." on when and where the first fireboat was used. According to available data the first fireboat—then known as "floating engine"—was operated in the City of New York in 1800.

Additional information on this subject has been received from one of our British readers, G. Hindson, Senr. Co. Officer, National Fire Service, Ladymead, Guilford, Surrey, England, who writes:

"Regarding early fire floats (the British equivalent of our "fireboats") it is on record that the Sun Fire Insurance Office had a float in commission on the Thames (London) in 1767. This float was constructed by Messrs. Tilley. The firm also constructed a fire float for the London Assurance Co. in 1793.

"In 1840 'the London Fire Engine Establishment'—which was the name given to the pooled resources of the principal insurance companies' Fire Brigades, had two floats in operation on the Thames, one of which required 120 men to operate the pumps, and it is reported to have been fitted with 10-inch pumps having a variable stroke.

"In 1855 Messrs. Shand & Mason constructed a steam float for the London Fire Engine Establishment. The hull was about 120-feet long with a beam of 15-feet and on her trials she is supposed to have pumped 1,700 gallons per minute through four 1½-inch jets. Propulsion was obtained by the discharge from the pumps through fixed jets in the hull and in still water the craft obtained a speed of 8 m.p.h. This float was in operation for 14 days at the Great Cotton's Wharf, Tooley Street fire of June, 1861. The destroyed property amounted to over £2,000,000. The float was withdrawn from service in 1890."

Mr. Hindson's information will be of interest to fire service historians who have believed that this country was responsible for the first fireboat, and for the first jet-propelled boat.

Post-War Fireproof Tents

It is reported that an Akron rubber manufacturer has already made a fireproof tent which may be the forerunner of the circus tents of the future.

They will be made of light fabric chemically treated against fire and then coated with a special coating which gives them a thin film that, it is said, will not wear off and will not burn. It is claimed for such tents that they will be not only fully fireproof, but easier to handle and more resistant to wear.

Fire Losses at Newport News

Fire losses in Newport News, Va., were $910,585 during December, 1944, it is revealed in the report of Fire Chief Garland A. Powers.

A breakdown of the report shows that damage to buildings amounted to $401,470 and to contents, $509,115. The insurance coverage on buildings was $401,295 and on contents $508,880 with a net loss for the month of only $410.

The greater portion of the loss resulted in the fire which destroyed the Chesapeake & Ohio pier 8 of the Hampton Roads Port of Embarkation on Dec. 17. The fire started when a truck backed into another vehicle, puncturing its own gas tank.

SANFORD D. DEWEY.

Charlotte Fire Department Aids Polio Victims

Fire Chief W. Hendrix Palmer and members of the Charlotte, N. C., Fire Department assisted the Charlotte Variety Club on March 5th in the greatest mass transfer of polio patients in history—the movement by caravan of 88 polio patients from the emergency polio hospital at Hickory, N. C., a distance of seventy miles to the permanent polio clinic of the Memorial Hospital in Charlotte, N. C. The caravan consisted of fifteen ambulances, seventy-four automobiles and a number of trucks. Escorting the caravan, which traveled at 30 miles an hour, were members of the Charlotte Fire Department, the State Highway Patrol and Charlotte and Hickory policemen.

At Hickory, N. C., Chief Palmer carried the first little polio patient to the caravan and placed her aboard an ambulance. The Chief led the procession. The cars and ambulances were loaded with painstaking care, and were flanked on the journey to Charlotte by one of the greatest arrays of police and fire guards ever gathered in the State. The caravan idea of mass transfer was sponsored by the Charlotte Variety Club, motion picture and showmen's organization, assisted by Fire Chief Palmer and Chief Walter Anderson of the Charlotte Police, and Chief Henry C. Severs of the Mecklenburg county police.

FOR VICTORY OVER FIRES...

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Practical, dependable, the Buckeye Shut-Off Nozzle owes its popularity to careful design and efficient service *under pressure*. Buckeye engineers produced a nozzle which insures satisfaction. IT DOES NOT LEAK. All working parts are accessible. The shut-off works easily under pressure and maintains its adjustment even when the valve is partially shut down. Full details on all Buckeye fire fighting equipment will be furnished on request.

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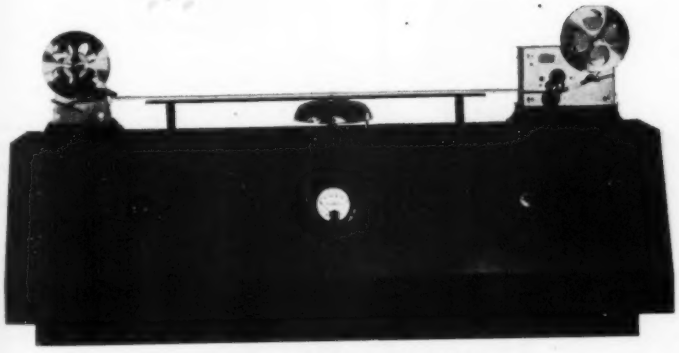
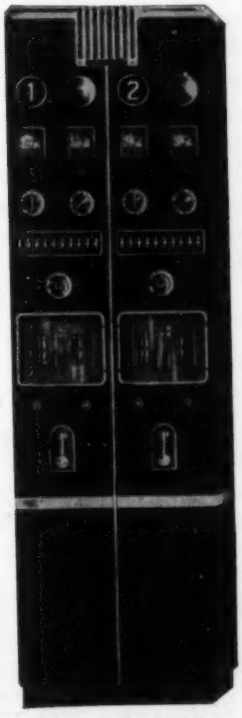


ABC FIRE STATION
RECEIVING SET



ABC FIRE ALARM
SWITCHBOARD

Southern Switch & Signal Company

Shreveport, Louisiana

Round Table

(*Continued from page 387*)

movable position by twelve or fourteen men. Second, the cargo type net which is usually used by fire departments as a means of protection to men drilling on scaling ladder work. And third, the circus type net, which is much more flexible than the cargo net and larger in area than either the cargo or the circular net.

Of the three types I would favor the circus type net if it were available for obvious reasons. It is much softer to land in; covers a larger area and with the proper equipment may be set up in position very quickly.

If a person either drops or jumps into a circular or cargo net from a point higher than 30 or 35 feet, there is a great danger of his being killed. The cargo net is so hard that the least he can expect to get is a severe bruise and a terrific shock. In landing in a circular net from the same distance the shock is of a much lesser degree because of the cushioned construction of this net, but the hazard to life is increased by twelve or fourteen more persons, no matter how adept the men holding the net may be.

C. A. Goodin, Chief, Muskogee, Okla.: I do not believe this is a desirable practice due to the manpower shortage in most departments. Practically all fire fighting would have to cease in order to have sufficient men to hold the net. Most people trapped in a burning building become frantic, and will jump at a net before rescue could be effected.

HERE IS THE QUESTION FOR THE NEXT ISSUE

1. When former firemen, now in the armed forces are mustered out, will they be reinstated in your department?

2. Will the time spent in the armed forces be credited to their seniority in the fire department?

3. Will they be given veteran's preference in promotions?

4. How will you handle the problem of returning ex-firemen who have received a medical discharge from the armed forces, but who want to regain their former fire department jobs?

It would also have a tendency to cause the firemen making the rescue to take unnecessary chances. A person falling from a ladder is as liable to fall on the opposite side as he is to fall into the net.

Frank F. Schroeder, Everett, Wash.: No such practice is used by this department for several reasons. Life nets are used on our drill tower work for the safety of new men in drill work, during the training period to determine their adaptability in performing such work.

Men used for such possible rescue work from ladders are men in whose ability we have confidence. The time element would not permit the use of such safety nets when life is at stake. I do not believe that the average fire department has enough spare manpower to perform such work without detracting from the necessary work at hand of taking care of the fire emergency.

Norman G. Olsen, Chief, Charleston, S. C.: I am of the opinion that it would be a waste of time to spread a life net under a ladder when rescue operations are being made.

L. A. Moore, Chief, Fresno, Cal.: We believe that fire departments should spread life nets under ladders when life is at stake.

However, there as situations, in my opinion, where life nets would not be necessary.

W. C. Moffatt, Chief, Regina, Sask.: I believe the practice of spreading life nets beneath ladders when rescues are being made is a desirable one. In the case nervousness on the part of the person being rescued, the possibility of either the fireman, the party being rescued, or both, being thrown from the ladder occurs. Spreading the net would prevent serious injury to any of them. I can see no serious objections to the spreading of nets in the case of rescue from a building.

The following reply is in answer to a previous question on fire alarm boxes at schools, theatres and other places of public assembly.

W. B. Miller, Sr., Chief, Columbus, Ga.: We do not require fire alarm boxes at

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MUNICIPAL FIRE HOSE

with Easy-Fold Construction has more flexibility and is easier to handle with longer life; additional footage can be added to the truck-bed and is easier to pack, without sacrificing the extra long-life of either the non-acid forming, slow ageing tube or burst resistant jacket.

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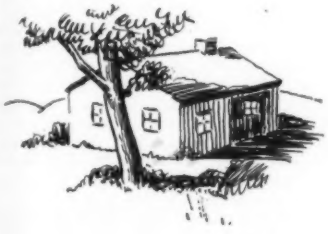

This old wood cut is from the first published volume of Fire Engineering, 1877

In 1877, when Fire Engineering was originally established, we had been manufacturing leather hose and nozzles for many years. Sons and grandsons of some of the fire fighters of those days are still using Eastman nozzles — and — as then — these nozzles are the finest experience and skill can possibly produce.

The men and women of this organization are lending every effort to serve our war effort through producing more and better goods of war. It's the fourth time this organization has been called on to help a war effort.

The sum total of all this experience will be yours tomorrow when the world's at peace and we return to serve our old — and new customers — with fire fighting products.

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schools, theatres, and other places of public assembly. Some of our school alarm systems are connected to master boxes, others are independent.

The advantage of connection with the municipal system means prompt service.

J. Ludie Croom, Chief, Wilmington, N. C.: Fire alarm boxes are not required at schools, theatres and other places of public assembly.

If the private alarm system were connected to the municipal system, faster transmission of alarms would result.

William Meinheit, Chief, Berkeley, Calif.: Chapter Eight of our Fire Prevention Code covers the installation of fire alarm boxes at schools, theatres and other places of public assembly. It is as follows:

"(a) Any person who owns, controls, maintains or operates any building or portion of a building in the City of Berkeley which is occupied or used as public or private schools or educational institutions attendance at which is pursuant to law, or as theatres, moving picture houses, or as hospitals, sanitariums, sanatoriums, convalescent homes, maternity homes, lying-in homes, rest homes, homes for the aged or infirm, and all buildings used for purposes similar to those herein described for the care of human beings, used for the housing and care of more than six inmates or patients, shall install and maintain a fire alarm box which shall be located at the nearest available place on the street adjacent to the main entrance of the building; such location to be selected by the Fire Chief, and connection made to the regular fire alarm circuit of the City of Berkeley.

"(b) The person required to furnish the fire alarm box as specified in this section shall also and in connection therewith, furnish and install one or more auxiliary box or boxes within the building to the fire alarm box located on the street in such a manner as to make automatic the operation of said box when an auxiliary box is operated.

"All of the above provisions shall apply to buildings now occupied, conducted or operated, as provided in Subsection "A" hereof.

"Section 802—Alarm Box Specifications. (a) The master box shall be of the quick successive non-interfering shunt-type box, approved by the Electrical Bureau of the City of Berkeley, and the Fire Chief.

"(b) In the event that there now exists a fire alarm box at any approved location at or adjacent to said building, such box being of the unauxiliarized type, such box shall be removed by the City of Berkeley, and any person, firm or corporation upon whose property said box is located, shall provide an auxiliarized box as required in this Section, and the same shall be installed at such location by the City of Berkeley.

"(c) The auxiliarized fire alarm box as herein required shall be furnished and delivered to the Fire Chief, and the auxiliary box or boxes within the building shall be furnished and delivered to the location of the master box on the street, within one hundred and twenty days after due notice shall have been given by the Fire Department Chief to the person, firm, corporation or board having control of such buildings as specified in this Section.

"(d) All wiring and other electrical work within any building shall be done under the rules of the National Board of Fire Underwriters and Electrical Code of the City of Berkeley by permit from and with the approval of the electrical inspector of the Building Department of the City of Berkeley."

H. P. Constantine, Chief, Bangor, Me.: The City of Bangor's ordinances do not require fire alarm boxes at schools, theatres and other places of public assembly.

One great advantage of the interconnection of such private alarm systems with the municipal fire alarm system is that there would be no delayed alarm when a fire did occur. A delayed alarm in any building housing many people when a fire occurs is just too bad. With the interconnection, the fire stations get the alarm as soon as it comes in.

We do have a large hospital here where the sprinkler alarm system is interconnected with our municipal fire alarm system. It works out very well.

I believe all schools and public or private institutions housing a great many people should have an alarm system interconnected with the municipal fire alarm system.

In buildings of this type there is always the great risk of a panic among the students or inmates, patients and nurses. They wait until too late before sounding the fire alarm. In some instances they have to run across the road to sound an alarm.

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The Universal Nozzle provides the *quicker* way to put out fires because the hoseman can change the type of stream in an instant for any sudden change in fire conditions. The Universal Nozzle provides the *safer* way to put out fires because it can put a 130 degree water curtain between the hoseman and the flames . . . also in an instant . . . while retaining a solid stream, if desired. The Universal is the versatile nozzle, proved by seven years of actual use under all conceivable conditions.

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BELL AIRCRAFT
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Bell Aircraft's four famous fighter airplanes ... XP-77, P-39 Airacobra, P-63 Kingcobra and the jet-propelled P-59 Aircomet.

Always a pacemaker, Bell Aircraft Corporation has long maintained a well-equipped fire department to insure maximum safety in plant and testing field operations. When Cardox Airport Fire Trucks became available to industry, Bell acted with characteristic promptness in adding one of these mighty fire fighters to its equipment. This truck, similar in design to the hundreds serving our armed forces in the U. S. and abroad, was put into active service on February 10th at Niagara Falls Municipal Airport, used by Bell for testing operations.

The following comments on the performance of this Cardox Truck, quoted from BELL AIRCRAFT NEWS, merit careful study by everyone concerned with the hazard of crash-fires:

"In a final acceptance test, Bell's new Cardox Airport Fire Truck was put through a demonstration which showed why it has won the reputation of being the most modern and efficient piece of equipment in existence for combating crash fires.

"To simulate conditions which would accompany a real plane crash, a mockup of a bomber wing, saturated with contaminated gasoline, was put on the airfield. Facsimiles of belly tanks, containing 100 gallons of contaminated oil and gas, were strewn on the ground nearby.

Raging Test Fire Completely Extinguished In 40 Seconds

"The wing mockup was ignited. In a matter of minutes an area covering 5000 to 6000 square feet was a mass of flames. Black clouds of smoke spiraled skyward as tongues of flame leaped 50 feet into the air.

"*Forty seconds after arrival at the fire the truck, utilizing only a portion of its combination of extinguishing mediums—three tons of liquid carbon dioxide and 500 gallons of foam solution—had totally extinguished the flames.*"

Airport authorities facing the problem of adequate fire protection for post-war operations should get full details on design, construction and performance records of Cardox Airport Fire Trucks. Write today for Bulletin 1965.

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SPECIAL TRAFFIC MODEL (shown at right) is designed to yield at ground line under impact, repair being simply renewal of breakable bolts and breakable coupling on stem. Dry top, revolving head, easy to lubricate. High efficiency because barrel diameter not reduced and there are no working parts or obstructions in waterway.

VALVES: A. W. W. A. types, iron body, bronze mounted with double-disc parallel seat or solid wedge type. Non-rising stem, outside screw and yoke; or with sliding stem and lever. Also furnished hydraulically operated. Square Bottom type operates in any position. All are rugged and dependable, made of best material with highest quality workmanship.

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Answers to a Previous Question

The following are in answer to a previous question on fire setting by juveniles.

John J. Tubridy, Commissioner of Fire, Buffalo, N. Y.: There has been some increase in fires set by juveniles. They were turned over to the Youth Crime Prevention Bureau.

I would recommend a close watch be kept on any youth who has a tendency to set fires. The Crime Prevention Bureau of the Buffalo Police Department is doing a splendid job in this respect.

Joseph A. Grantonic, Chief, Mingo Junction, Ohio: Fires set by juveniles have not increased due to the war. We are troubled by youngsters setting brush fires during the dry season year in and out.

Only in a few cases have we been able to apprehend them. Some were brought in before the mayor and given a tongue lashing, but this didn't seem to stop them.

I had one experience where three boys caught playing with matches were brought before me. I gave them a lecture on the resulting consequences, and made them write fifty times each that they would never play with matches again. I believe that is a good remedy, for the kids dread the idea of writing something over so many times. We have never had these boys in again.

Edward Grenfell, Chief, Portland, Ore.: Juvenile-set fires have increased about fifty per cent. We have assigned a fire captain to fire prevention education in schools and youth organizations. All juvenile set fires are thoroughly investigated and the children involved and their parents are brought to the fire marshals' office. Records are kept of all children involved and second offenders are referred to the juvenile court for action.

The San Francisco plan for a parental court is being supported by the Fire Prevention Committee of the Chamber of Commerce and this department, as it is felt that parents are responsible for the increase.

E. N. Whitaker, Chief, Tacoma, Wash.: We have about five times as many juvenile-set fires as before the war.

The children are picked up by the inspector, interrogated and taken to their homes where the parents were also given a good taking to.

I believe that if parents would stay home and take care of their children instead of working or patronizing amusement centers, the number of fires set by juveniles would decrease.

James Macgregor, Chief, Edmonton, Alta.: We have not experienced an increase in juvenile fire setting.

In the interests of citizenship and to broaden the minds of the children not only within the limits of the City of Edmonton but including the surrounding territory even to a distance of sixty miles away, large numbers of school children of various grades and accompanied by their teachers pay visits to the city. They visit the packing plants, the power plant, the fire department and other places of interest.

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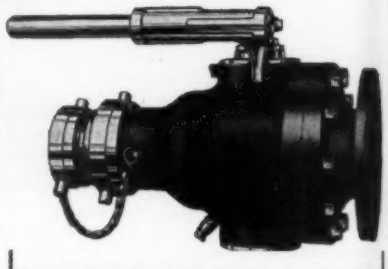

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In a Hall-Scott you get power to spare in the lower R.P.M. ranges — pick up steps up, engine wear goes down. The "400" can handle a 2000 gallon pump, which, due to lack of power, has previously not been possible. And unit-assembly design permits any engine unit to be quickly removed, a spare installed, and the apparatus returned to duty as repairs are made.

While specifically designed for use in fire apparatus, the Hall-Scott "400" series engines are "blood brothers" of the rugged Hall-Scott motors now fighting in the hulls of United Nation escort boats and under the hoods of tough-duty tank retrievers.

A Hall-Scott 470 engine powers this 85' Pirsch aerial. Property of Oakland, Calif. Fire Department.

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shown the many pieces of apparatus, how the pieces of apparatus and equipment work, including the aerial ladder, turret nozzle, life net, etc. One other point of interest is the fire alarm system, explanation given as to how is operates and the many dangers of turning in a false alarm.

This, I believe, is something that should be done in all cities, for it tends to create in the minds of the children their responsibilities to their neighbors and the city or town in which they reside.

E. Perrish, Chief, San Diego, Cal.: We have noticed a 100 per cent increase in the number of fires set by juveniles.

We make fire prevention talks in schools and over the radio and have organized junior fire marshall clubs in federal housing projects. The results have been very poor.

G. R. McAlpine, Chief, Oklahoma City, Okla.: We have experienced about a fifty per cent increase in juvenile fire setting.

In each instance where a child set a fire, I called at the school in the immediate vicinity and asked the principal to call an assembly of all the children. In some cases the auditorium was not large enough to accommodate the entire student body and so we would have two. At the assemblies, two other chiefs and I appeared in full uniform before the children and talked to them in a language they understand, pointing out the seriousness of the fire and calling their attention to all the fires in the neighborhood and elaborating on the fires that had occurred in their school.

Then we placed the entire student body on their honor and pledged them not to start any fires and to report any they saw. We also asked them to report any other boy or girl who they knew started a fire. We have had remarkable results from this plan. In one instance where we had five fires in the school, two church fires and many others in garages and residences in a particular area, we called such an assembly. The result was that we didn't have a single fire set by a child after that.

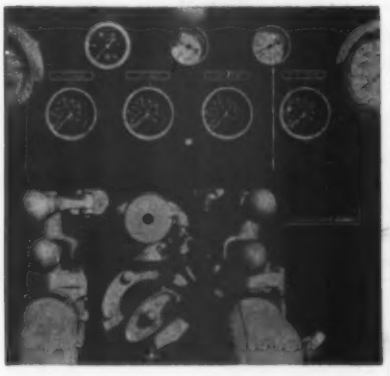
The above method is, in my opinion, the only sound method that can be used. This method requires tact and diplomacy. The fact that we appear in full uniform when addressing one of these meetings carries more weight in making a request than anything else.

We have in Oklahoma City, the Kiwanis Junior Police in all schools. As a member of the Kiwanis Club I appear on the program at every one of the ninety-six schools and install the junior police in the presence of the student body. On this occasion I also wear my uniform. It is my opinion that if the fire chief avails himself of the opportunity of appearing before the students of his schools, he can accomplish a lot in reducing the number of fires set by children. He will also be doing a community service that will pay big dividends.

William J. Sudeith, Chief, Saint Paul, Minn.: We have noticed an increase in the number of fires set by juveniles. In 1943, 102 out of 1063 building fires were set by juveniles, or 9.6 per cent of the total fires; in 1942, 81 out of

NOZZLE PRESSURATER

FOR instant, accurate measurement of Nozzle Pressure and rate of flow in gallons per minute.



INSTALLED AT THE ENGINE
Actual Panel Installation showing 4 Nozzle Pressuraters on Pumper.

•

ELIMINATES GUESSWORK AND DANGER TO HOSEMEN BY PROVIDING FOR INSTANT CONTROL AT THE ENGINE

•

Write for Descriptive Bulletin No. 171-I

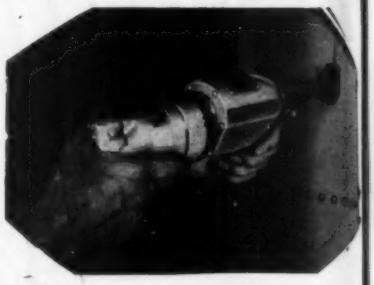
•

Attention Manufacturer's Representatives. Your territory may be open.

Write to:

BARTON
INSTRUMENT COMPANY
2306 East 38th Street
LOS ANGELES 11, CALIF.

THE NEW
SAW-GUN
SHOULD BE STANDARD ON ALL FIRE-FIGHTING EQUIPMENT



Here's Why..!

The Saw-Gun is a portable power-saw that will quickly cut into all metals, wood and other materials. Quickly attaches to any electric or air drill, and may also be propelled by a flexible shaft. Insert ordinary hack-saw blade for cutting.

Firemen equipped with this handy tool can now get at the fire quickly. Can cut openings into obstructions regardless of their material. Cuts rapidly through heavy gauge steel. No need to waste precious time removing steel gratings . . . cut them out of the way with this amazing portable tool. Does away with slow, cumbersome, dangerous gas cutting torches, together with their long lines of hose and heavy tanks.

Progressive fire-chiefs who know the importance of getting at a fire *fast*—who want a quicker means of getting to entrapped persons, will add the Saw-Gun as standard equipment.

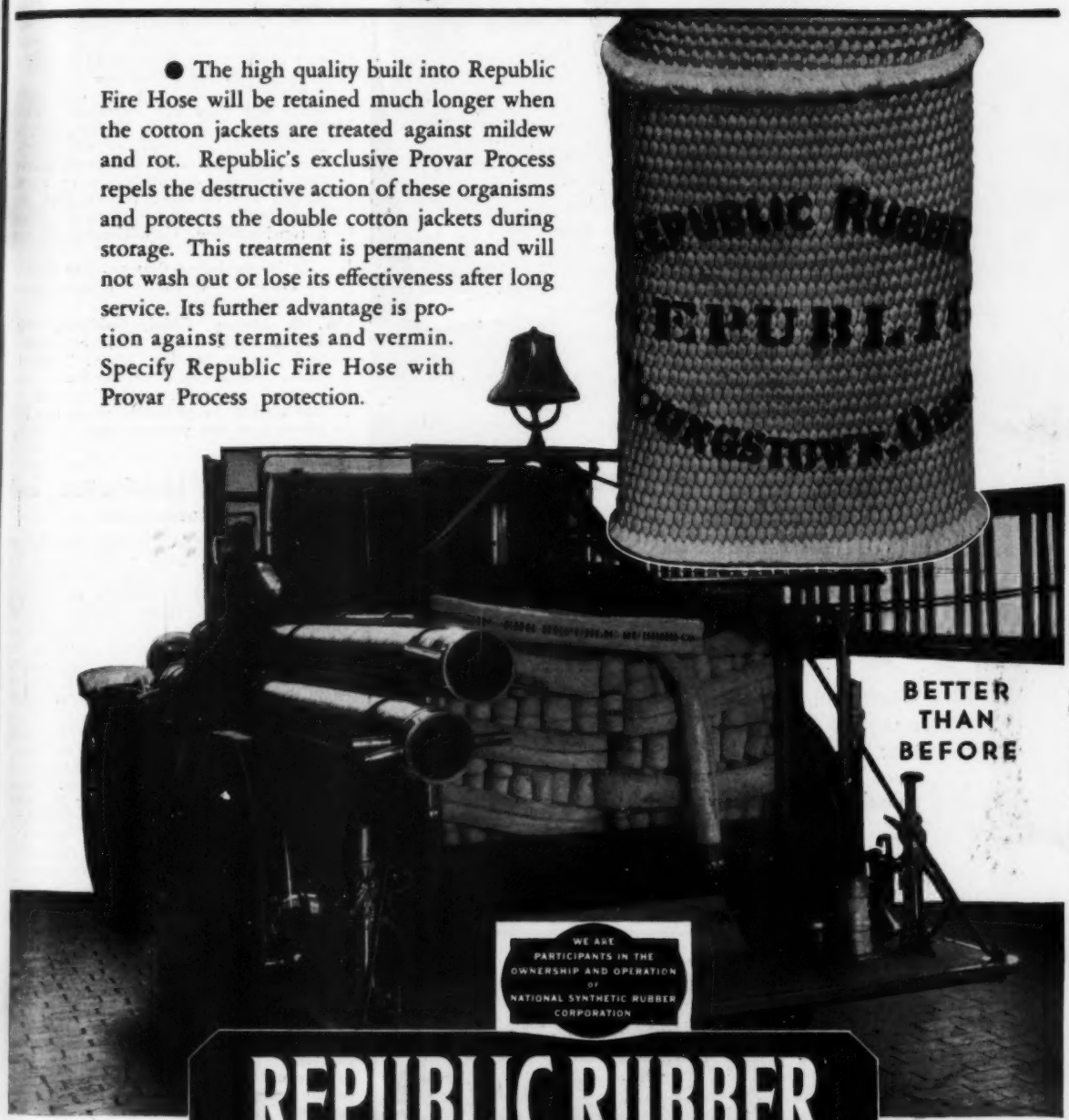
ONLY $42.00
QUICK SHIPMENTS ON AA-5 PRIORITY OR HIGHER

Sold on Money-Back Guarantee

SEE YOUR JOBBER or WRITE DIRECT
Mid-States
EQUIPMENT COMPANY
Saw-Gun Division
2419 S. MICHIGAN AVE., CHICAGO 16, ILL.

BE SURE OF LONGER SERVICE WITH *Republic Fire Hose*

● The high quality built into Republic Fire Hose will be retained much longer when the cotton jackets are treated against mildew and rot. Republic's exclusive Provar Process repels the destructive action of these organisms and protects the double cotton jackets during storage. This treatment is permanent and will not wash out or lose its effectiveness after long service. Its further advantage is protion against termites and vermin. Specify Republic Fire Hose with Provar Process protection.



REPUBLIC RUBBER

DIVISION

LEE RUBBER & TIRE CORPORATION

YOUNGSTOWN 1, OHIO

REPUBLIC INDUSTRIAL PRODUCTS
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LEE DELUXE TIRES AND TUBES
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CRACKERJACK
FIRE HOSE

DEPENDABLE FIRE HOSE SINCE 1907

Above all, fire hose must possess durability and strength. Over the years, Crackerjack Fire Hose has consistently met these tests of quality.

Specify Crackerjack, *the fire hose you can always depend on!*

The AMERICAN RUBBER Mfg. Co.
Park Avenue and Watts Street • Oakland, Calif.

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience goes into their manufacture and they embody valuable and exclusive features.

Write for the FACTS.

EDDY VALVE CO., Waterford, N. Y.

SIRENO
PRECISION MADE ELECTRIC SIRENS

THE UTMOST IN DEPENDABILITY AND LONG LIFE

THE SIRENO CO., Inc.
214 WILLIAM STREET
NEW YORK CITY

SIRENO WITH 7" RED FLASHING LIGHT

1004 fires were set by juveniles, or 8.1 per cent; in 1941, 66 out of 951 or 7 per cent; in 1940, 49 out of 1000, or 4.9 per cent; in 1939, 65 out of 1091, or 6 per cent; in 1938, 54 out of 1037, or 5.2 per cent.

The average of 1941 to 1943 was 249 out of a total of 3018 fires, or 8 per cent; the average of the three-year period from 1938-1940 was 168 fires set by juveniles out of a total number of 3128 building fires, or 5.4 per cent.

Our arson inspector makes an investigation. Whenever it is found that children are responsible for these fires, we do the following:

Where the children are over nine years old they are questioned with the cooperation of the Police Juvenile Division. If the fires are set maliciously, they are taken into court where they are put on probation or made to pay the damage. Where fires are accidentally set, the children are given a reprimanding. Conditions have not improved.

It is my belief that parents should be made to pay for the damage done by their children.

W. G. Lutkey, Chief, Oakland, Cal.; R. E. Pare, Chief, Montreal, Que.; and George Sinclair, Chief, Toronto, Ont., report that they have not noticed any appreciable increase in fire setting by juveniles since the beginning of the present war.

Problems of Mobilization and Reconversion

Most of our readers by this time know that at the "request" of James F. Byrnes, Director of War Mobilization and Reconversion a number of drastic steps have been taken toward all-out mobilization of the nation's manpower and material. Of particular interest to some was the end of all race meets and the curtailment of sports events and the establishment of critical labor areas.

The story behind these development is told in the "First Report to the President, the Senate and the House of Representatives," by the Director, James F. Byrnes, published December 30, 1944 (U. S. Government Printing Office dated Jan. 1, 1945).

Railroad Fire Losses

Fires, mostly due to preventable causes, last year resulted in actual damage of $2,406,236 to railroad property, according to Walter C. Neely, president of the Mutual Fire, Marine & Inland Insurance Co., Philadelphia.

Fire, responsible for the destruction of or damage to railroad buildings, including contents, locomotives, box cars, coaches and other rolling equipment and merchandise in transit during the year 1944 has hampered the war effort of the railroads to an incalculable extent, said Mr. Neely. The large amount of loss indicated in dollars is only part of the record of equipment and vital goods destroyed or damaged beyond recovery.

Of losses caused by carelessness, which it is claimed amounted to $1,122,261 of the total losses, smoking was by many times the larger—accounting for $1,115,985.

Arson on Increase in N. Y.

Fire Commissioner Walsh of New York City, reporting on the city's fire losses in 1944 placed the total at $10,394,130 compared with $9,186,558 in 1943.

The Commissioner stated 449 persons were injured at fires compared with 523 in 1943 and 128 were killed as against 170 the year before. Tenement fires were up, there being 9,589 in 1944 against 8,843 the previous year. Fires in factories showed an increase, 1,678 as against 1,241 in 1943. Store fires numbered 1,892 compared with 1,788 in 1943 while dwelling house fires also showed a slight gain, from 3,497 in 1943 to 3,551 last year.

Bonfires and brush fires outnumbered all others; fires from cigarettes and smoking ranked next.

The Commissioner said that 96 persons were arrested for arson as against 80 in 1943, and 77 were convicted. There were 132 incendiary fires in 1944 as against 129 in 1943.

Fire Protection Through Codes

"FIRE PROTECTION THROUGH MODERN BUILDING CODES," a 124 page, cloth bound book, written by B. L. Wood, Consulting Engineer, and published by American Iron and Steel Institute, 350 Fifth Avenue, New York, is a correlation of factual data and regulatory procedure by the Committee on Building Codes of the Institute.

"The purpose of the book," to quote its Foreword, "is to assist in the rationalization and the modernization of fire protection regulations by correlating the pertinent scientific data which have become available in recent years, so that clearer thinking in the preparation of fire protection regulations for building codes may be stimulated. Only through a clearer perception of the fundamental criteria governing fire hazards and fire safety can greater uniformity of fire protection regulations be achieved in future revisions of building codes throughout the United States."

"The Fire Service Today"

The story of the British fire service, is told in the book **"The Fire Service Today"** published by the Oxford University Press, as the latest in its "Pageant of Progress" series. The authors are Frank Eyre and E. C. R. Hadfield.

The book describes fire fighting methods in Great Britain, and the National Fire Service, with a foreword by Commander A. N. G. Firebrace, C.B.E., R.N. (Retd.) Chief of Fire Staff, N.F.S. The contents are arranged on thirteen chapters and cover such topics as: The History of the Fire Service; Firemen's Training; Pumps; Special appliances; Miscellaneous Equipment; Communications; Water Supplies; Peacetime Fire Fighting; Special Fires; River and Sea Services; and Wartime Fire Fighting. There are numerous illustrations of fires and appliances. The book is sold in this country by Oxford University Press, 114 Fifth Avenue, New York 11, N. Y. Price $2.00 postpaid in U.S.A.

1st Draftee—"What did the little rabbit say as he ran out of the forest fire?"
2nd Same—"Hooray, I've been defurred."—**Old Maid.**

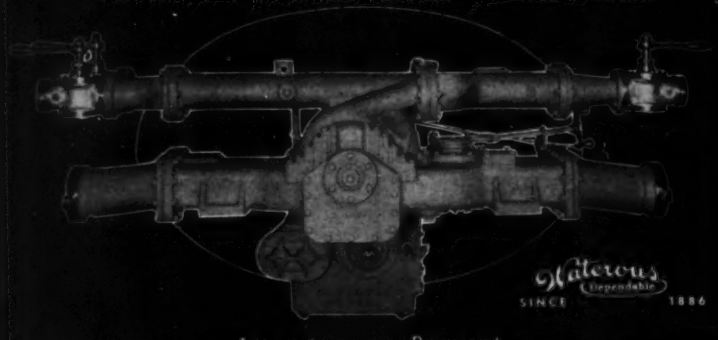
By Frederic Lewis

The Fire Fighter's Heavy Artillery...

WATEROUS Fire Pumps have great hitting power and they have the inherent ability to keep on going at maximum capacity. Leading makes of fire apparatus are WATEROUS equipped.

...You can depend on a

WATEROUS



Literature on Request

WATEROUS COMPANY • ST. PAUL, MINNESOTA

Also Manufacturers of the WATEROUS Fire Hydrant

WATEROUS FIRE PUMPS

GET THERE FASTER

***Clear the Street on Your Side with this efficient* Wig-Wag Redhead on Your Equipment**

You clear your side of the street quickly, day or night, as the oscillating red beam of this Wig-Wag Redhead sweeps the street and flashes red signals through to the windshields of cars away ahead of you. You get there faster, safer, with less use of siren. Scientifically built; moderately priced.

Test This Better Warning Light Write today for folder 145

CARPENTER MFG. CO.

2001 Master-Light-Bldg., Boston 45, Mass.

JANESVILLE QUALITY TURN OUT CLOTHING

Our turnout suits are giving excellent satisfaction in most of the large fire departments throughout the U. S. and

THERE MUST BE A REASON WHY SO MANY FIREMEN INSIST ON JANESVILLE QUALITY

NOW AVAILABLE!

We can now supply old type ¾ Felt-lined Firemen's Boots.

JANESVILLE APPAREL CO.

JANESVILLE, WIS.

Incendiary Fires Decrease for First Time in Years

Incendiary fires for the year ending April 30, 1945, have been fewer than in many years because of economic factors growing out of the war, according to the annual report just issued by the Committee on Incendiarism and Arson of the National Board of Fire Underwriters.

No enemy-directed sabotage by fire was discovered during the year but agents of the Arson Department of the Board gave assistance to Government services in larger volume.

The Board's agents investigated 1,796 fires of suspicious origin, or 216 fewer than the year before. A tabulation of cases in which the Board's agents turned over results of their investigations to public authrorities shows that the number of arrests, convictions and acquittals were lowest in the fourteen years since 1931.

"The continuation of the world war," the report adds, "has meant the continuation of high prices for commodities of all types and an unusually high level of employment, so the profit incentive for incendiary fires has not been present.

"It is anticipated that with the return of peace incendiary fires will increase and the Committee is prepared to meet these conditions by the employment of additional assistance wherever necessary.

"The prosecuting attorneys, fire marshals, police officials, sheriffs, and all persons engaged in the work of investigation and prosecution of arson, notwithstanding losses in personnel, have handled diligently and successfully matters which have come to their attention. We feel that the law enforcement agencies of the country are better prepared now than at any similar time to cooperate with the more troublesome conditions which it is feared may come with the change in war conditions."

Chief George W. Sasse Dies

Former Chief George W. Sasse of the Wilmington, Del., Volunteer Fire Department, died recently in the U. S. Veterans Hospital at Perry Point where he had been a patient for the past seven years.

Chief Sasse was born in Wilmington in 1860. In 1886 he commenced working at the Wilmington Post Office as a mail carrier.

When the United States entered the Spanish-American War he entered the Army as a first lieutenant. He was later promoted to captain.

During World War I he became assistant superintendent of mails. After serving in this capacity for four years and nine months, he returned to carrier service. He retired in April, 1927.

Chief Sasse was an active member of the Volunteer Fire Department for forty-two years. He was vice-president of the Washington Fire Engine Company when the paid department succeeded the old company. He served as chief of the volunteers from 1898 to 1900. He was an honorary life member of the International Association of Fire Chiefs.

He is survived by his wife, Mrs. Ella L. Sasse; his son, Colonel Ralph I. Sasse, stationed at Fort George Meade, Md., commanding the Seventh Regiment of Armored Calvary and a granddaughter.

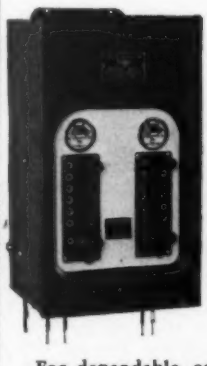
The element of time is of first importance in the successful treatment of burns. If a burn is treated within 15 minutes after it occurs, the probability of blister formation is reduced to a minimum. But if time is wasted before proper treatment is started, serious complications and infection may follow.

When using Gebauer's TANNIC SPRAY in the treatment of burns, the factors involving time-loss are eliminated. This preparation is a stable solution of tannic acid ready for immediate use. Packaged in a sturdy amber bottle having an automatic dispensing cap, which permits the projection of the solution in the form of a fine jet stream. Upon application the solvent evaporates rapidly, covering the burn with an evenly applied, dry and flexible film of tannic acid.

Gebauer's TANNIC SPRAY is a practical *first* first-aid treatment for first, second, and small area third degree burns. Write for literature.

THE GEBAUER CHEMICAL CO.

9410 St. Catherine Ave. • Cleveland 4, Ohio



A Dependable BATTERY CHARGER

For dependable, economical and efficient one-day battery charging service, this Full-Wave G-E Tungar should be your choice. It will give a fast or slow charging rate or a combination of both. Strongly built to withstand hard usage this G-E Tungar is extremely simple to operate. It's versatile too—at 2 to 6 amperes it will handle twenty-four 6-volt batteries, or twelve 12-volt batteries, or six 24-volt batteries. At 2 to 12 amperes it will handle twelve 6-volt batteries, or six 12-volt batteries, or three 24-volt batteries. For more information, write to Section A 658-58, Appliance and Merchandise Dept., General Electric Co., Bridgeport, Conn.

BUY WAR BONDS AND KEEP THEM

GENERAL ELECTRIC

War Fare

By Roi B. Woolley

Army Uses Anti-Burn Cream

The Army now has a fireproof way to protect soldiers who use the bazooka, the War Department has revealed. As a safeguard against burns, tank crews and soldiers apply "Flashburn," a cream, to face, hands and other exposed parts so that the skin does not show through. The hazard of burns from both bazookas and flame throwers is greatly reduced.

Is this another war-product that may have an influence on post-war fire fighting?

* * *

What — No Bounce?

In the days before the war, Allan J. Cameron, Rockville Center, N. Y., used to range the skies thereabouts writing advertising slogans high over Long Island beaches. He was president of the Skywriting Corporation of America. Last month he got a little souvenir from his old ranging grounds (or skies) now preempted by the wings of Mars. It was a fully-equipped five-man rubber life boat, accidentally dropped from a B-24 bomber.

The rubber "bomb" tore some shingles off his front porch then inflated itself for sea duty right on his roof. Mr. Cameron notified Mitchel Field and a crew from the Army Air Force removed the raft.

* * *

It Might Have Been Here!

An American Liberty ship loaded with aerial bombs blew up in Bari Harbor, Italy, in April killing or injuring possibly 1,867 Italian citizens and an undisclosed number of American and British servicemen.

Only two persons who were aboard the ship at the time are reported to have survived. They were blown clear, according to reports which placed the total toll of dead at 360 and the injured at 1,730. The fate of the crew, assumed to be Americans, is not given although "next of kin have been notified," it was reported.

Three other merchant ships caught fire from the explosion but the flames were brought under control. The harbor, though damaged, continued to work to full capacity. A warehouse collapsed, as did the roof of Bari's 1,000-year-old cathedral.

Cause of the blast, the second in Bari harbor in less than two years, has not been determined. More than 1,000 persons, mostly American and British merchant seaman, were killed December 2, 1943, when German bombers sank 17 ships in the port.

The explosion was accompanied by a tidal wave which swept some dock workers into the water.

* * *

OVERSEAS NEWS

Watering the Milk — Wholesale

A cow belonging to a farmer at Beworth, Hants, Eng., fell into an underground water tank through an opening only some four feet square. She was swimming in 14 feet of water some 10 feet below the opening, and the problem was to get her out. The local police called the NFS (National Fire Service)

HAND-IN-HAND WITH YOUR
TRAINED RESCUE SQUADS
FOR EFFECTIVE RESUSCITATION

The H-H INHALATOR

GOSHEN (IND.) FIRE DEPARTMENT RESCUE SQUAD WORKING WITH PRONE-PRESSURE ARTIFICIAL RESPIRATION—TO SAVE THE SECONDS THAT SAVE LIVES IN EMERGENCIES

In all cases of asphyxia, a single minute may mean the difference between life and death! That's why artificial respiration training is so vital—and that's why the famous H-H Inhalator fits in so outstandingly with the work of your rescue squads.

The Schaefer prone pressure method of artificial respiration should begin immediately and the H-H Inhalator is applied to the victim without disturbing the respiratory rhythm—without an instant's interruption to the established breathing cycle.

This instrument furnishes, *without pressure or suction*, the correct mixture of oxygen-carbon dioxide to stimulate normal breathing and effectively hasten recovery.

The successful application in Fire Departments throughout the country proves beyond question the H-H Inhalator's value. Write for Bulletin CA-9 and let us arrange a demonstration without obligation.

MINE SAFETY APPLIANCES COMPANY
BRADDOCK, THOMAS AND MEADE STREETS · PITTSBURGH 8, PA.
District Representatives in Principal Cities
In Canada: MINE SAFETY APPLIANCES COMPANY OF CANADA, Ltd.
TORONTO, MONTREAL, VANCOUVER, CALGARY, NEW GLASGOW, N.S.

CIRCUL-AIR
FIRE HOSE DRYER
- Is easier to use
- Saves drying time
- Reduces hose stretch
- Prevents mildew and rot
- Improves building design
- Air-conditions as it dries

THE CIRCUL-AIR CORPORATION
6339 East Palmer Avenue
DETROIT 11, MICHIGAN

who made a speedy run of six miles, and on reaching the scene decided that the only way to rescue the animal was to get her to the four-foot opening; so 7,000 gallons of water were pumped into the tank until the level of the water rose and floated the cow high enough to be reached and rescued. THE FIREMAN

* * *

Dirty Work in the Channel

A gasoline and ammunition laden ship collided with an anchored vessel in the English Channel. As an eighty-mile-an-hour gale buffeted the ships, gas and munitions on one craft exploded and burned, and bullets ricocheted in all directions. Coastal towns shook from the blast.

As townspeople watched, an unidentified collier came alongside the "floating furnace." Ignoring the flying bullets and flaming falling debris, men of the collier saved fifty-seven of the crew. Five were lost. Fireboats of the NFS and Navy also braved the blasts and fought the fire for six days before bringing it under control.

* * *

Oh for the Life of a Fireman

A fire under a concrete floor of a metal company factory in England burned for 17 days. To extinguish it, 1,000 feet of floor space were excavated to a depth of twelve feet and over 200 tons of burning coal dust and ashes were removed by firemen working in four shifts.

In another fire which broke out at a Ministry of Food flour warehouse, firemen had to flounder waist deep in flour paste. One of the British Brothers described it as a "paper-hangers' paradise."

* * *

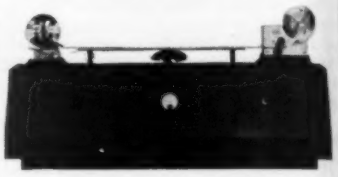
Hot Off the News Ticker

It was estimated that before the Russians knocked off Berlin 85 per cent of the city had been devastated by aerial bombings and fire. . . . In Toronto, Ont., a house on Sackville Street was wrecked and windows of three others blown out when a shell, souvenir of the last war, fell off a window sill and exploded. . . . A large part of the port section of Cadiz, Spain, was destroyed by fire in April. Thousands of tons of pork and food stuffs were lost. . . . In the race through Germany, the 84th Infantry Division made use of German fire trucks to move up the doughfoots. . . . Miniature versions of the deadly M-69 incendiary bombs, now being dropped on Japan, will be used after the war by Boy Scouts and other campers to start fires, it is predicted by Major Thomas Whitesead, Army Chemical Warfare Service. He said that three inch baby bombs with jellied gasoline filling will burn fiercely for six minutes making it possible to ignite water-soaked or green wood. All of which may presage more headaches for the fire service! . . . In one deadly moment last October when the aircraft carrier Princeton exploded as the cruiser Birmingham was alongside fighting the fire aboard the carrier, there were 649 casualties, of which 229 lost their lives. . . . The aircraft industry wants the government to make available as many as 10,000 expendable surplus military planes for crash testing in the interests of aeronautical science, it is said. How about a few hundred for experimental work in the fire service? . . . For an hour during an April fire, members of the New York fire Department worked in the dark among exploding bullets in the

HOSE BRASS GOODS
WB LINE
THE WOOSTER BRASS CO.
WOOSTER, OHIO

SOME WORDS FOOL YOU
like
RAISE (to erect) RAZE (to destroy)
BUT
WOOSTER BRASS always means the BEST in fire equipment supplies.
THE WOOSTER BRASS CO.
WOOSTER, OHIO
When you specify products bearing the TRUMPET trademark, you can SAVE and BANK on SAFETY.

FIRE ALARM TRANSMITTERS
MANUFACTURED TO
STANDARD or INDIVIDUAL SPECIFICATIONS



ABC FIRE STATION RECEIVING SET
SOUTHERN SWITCH & SIGNAL CO.
SHREVEPORT, LA.

MANHATTAN FIRE HOSE

with FLEXLASTICS* Lining
. . . Flat-Folding for compact rolling and easy handling . . . Pressure-Tested, under high pressure . . . now made with FLEXLASTICS Lining for longer Service life.
Also made Radio-Active Treated, Mildew-Proof, Rot-Proof and Freeze-Proof.
*The term FLEXLASTICS is an exclusive MANHATTAN trade mark. Only MANHATTAN can make FLEXLASTICS.
KEEP AHEAD WITH MANHATTAN
THE MANHATTAN RUBBER MFG. DIVISION of RAYBESTOS-MANHATTAN, INC.
Executive Offices and Factories, Passaic, N. J.

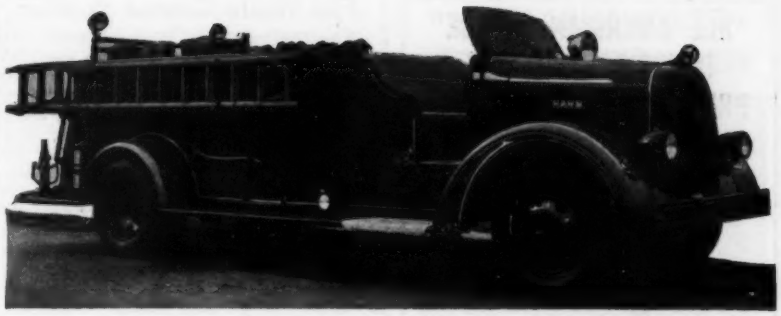
basement of the Seventy-first Street Regiment Armory of the New York Guard. . . . Two fires prior to the San Francisco Security Parley made it tougher and costlier for the caterers of the conference. Five hundred cases of fruit earmarked for delegates went up in smoke in one fire and thousands of flags for the conference burned in another warehouse blaze, both in Los Angeles. . . . In San Francisco, fire narrowly caused a serious handicap to the Conference when a blazing express train ignited ties for 4,000 feet on the lower deck of the San Francisco-Oakland Bay Bridge. Oakland, Navy Treasure Island, San Francisco and highway patrol fire equipment, aided by two S.F.F.D. fireboats, extinguished the fire after an hour and a half battle. . . . In New York City two longshoremen were overcome by fumes when a smoke bomb they were unloading at a North River pier was ignited accidentally. Firemen, using gas masks, removed the carton containing the bomb. . . . Allied firefighters helped further already panicky German officials by dropping their auxiliary fuel tanks on buildings believed to be headquarters for the whole Western front. The tanks exploded with terrific burst of flame that quickly destroyed the central building. . . . A German V-bomb scored a direct hit on a factory in southern England killing many, turning building into a blazing inferno. . . . When citizens of Queens, L. I., complained about noisy planes operating in and out of LaGuardia Field, Major Elmer Haslett, city airport director, said "be glad they're friendly." . . . The German Legation in Lisbon, Portugal, burned to the ground last month. Cause not determined but report said fire started on top floor where archives were kept. . . . A new aerial fire bomb that covers the target with white-hot flame in which nothing human can survive is now being used against the enemy in dug-in positions, it has been disclosed. The bombs can be dropped from low altitudes without endangering the pilot or his craft. . . . The wayward press states the fire department of the village of Rockton, Ill., has acquired one of five OCD fire "trucks" allocated the Rockford, Ill., office of civilian defense three years ago. Village of Winnebago, Ill., also seeks to secure another OCD "truck"—but OCD never furnished emergency auxiliary fire "trucks". . . .

Keystone Fire Chiefs Association Meets

One hundred and fifty fire chiefs and guests attended the annual spring meeting of the Keystone Fire Chiefs Association on May 19 in the Swarthmore Women's Club, as guests of the Swarthmore Fire and Protective Association.

Highlight of the meeting was a talk on fire and sabotage by arson given by Special Agent Francisco of the Philadelphia office of the Federal Bureau of Investigation.

The meeting was conducted by Chief McInerney, President of the Association. Harry Hamby, Sr., President of the Swarthmore Fire and Protective Association and Dr. John Pitman, Swarthmore Burgess, welcomed the chiefs and guests. Former Captain John Rowe of the Philadelphia Fire Department spoke on "What makes a volunteer."



"HAHN" FIRE APPARATUS

SINCE 1907

FINEST IN THE WORLD ★ STREAMLINED ★ BALANCED CHASSIS ★ AMPLY POWERED ★ VERY EFFICIENT PUMPS WITH PLENTY IN RESERVE

HAHN MOTORS, Inc.

HAMBURG, PA.

Barton Front Mounted

AMERICAN-MARSH PUMPS

Barton-American Midship

FIRE APPARATUS CENTRIFUGAL PUMPS

PATENTED

• FRONT MOUNTED FOR EASE OF OPERATION • AUTOMATIC VACUUM PRIMER • HIGH PRESSURE AT LOW ENGINE SPEED • BOOSTER TANK OPERATION WITH TRUCK IN MOTION •

Offered in capacities from 250 to 600 G.P.M.

•

AMERICAN-MARSH PUMPS, INC.

Battle Creek, Michigan, U. S. A.

"ALL AMERICAN CHOICE"
INVINCIBLE NOZZLES
PREPARE — PROTECT
Portable equipment is the watchword of today.
Buy
INVINCIBLE NOZZLES
and enjoy the benefits derived by experience of the pioneers in the nozzle field.

Fig. 403

F. N. McINTIRE BRASS WORKS
Successors to A. J. Morse & Son, Inc.
BOSTON, MASS.
1837 — 1945

HARRINGTON
FIRE ALARM BOX

HARRINGTON FA-26

FOR EVER — — —
DEPENDABLE

Highest Quality Cast Aluminum inside and out. Light, easy to install. Long life — free of corrosion. Quick action doors. Meet every specific requirement.

HARRINGTON
SIGNAL COMPANY
MOLINE - - - - ILLINOIS

Fire Waste Contest Winners

The National Fire Waste Council has announced the winning cities in the 1944 National Fire Waste Contest, with Wichita, Kansas, as the grand winner.

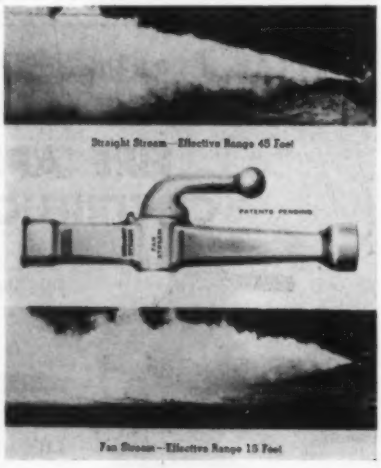
For the purposes of the contest, cities are enrolled in six population groups. A grand award goes to the top winner for all classes, and separate awards are made in each classification. The six cities winning the group awards are: Class I (Pop. over 500,000)—Milwaukee; Class II (250,000 to 500,000)—Providence, R. I.; Class III (100,000-250,00)—Wichita; Class IV (50,000-100,000)—Anderson, Ind.; Class V (20,000-50,000)—Marietta, Ga.; Class VI (under 20,000)—Fort Collins, Colo.

The National Fire Waste Council was created by the Chamber of Commerce of the United States, in cooperation with other organizations, for the purpose of reducing America's annual fire toll. For two decades it has promoted fire protection through education of the public to the hazards of fire.

News of the Manufacturers

Dual-Stream Nozzle Announced

Dugas Division of Ansul Chemical Company, makers of Dugas fire extinguishers, announces the development and introduction of a new dual-stream nozzle which increases the fire fighting effectiveness of its wheeled models. The



new nozzle permits the operator to apply the dry chemical on a fire either as a long range straight stream or as a shorter range fan stream.

The new dual-stream nozzle and other improvements which have been made to the Dugas wheeled models have been approved by the Underwriters' Laboratories and the Factory Mutual Laboratories.

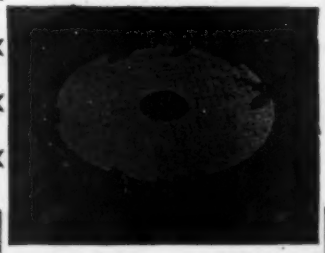
Frank Rowe Joins Quaker Rubber

Announcement is made by Quaker Rubber Corporation, W. E. Cox, Advertising Manager, that Frank A. Rowe has become associated with Quaker Rubber Corporation of Philadelphia as Assistant

ATLAS
LIFE NETS
"the finest," have been instrumental in saving many hundreds of lives, without injury to the person rescued or to the men holding the net.

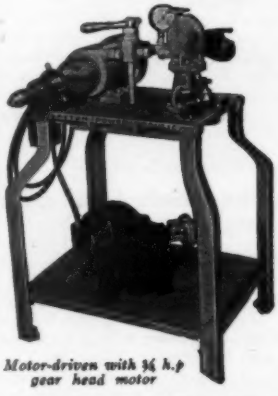
The many exclusive features of the Atlas net have been proven through performance. ATLAS NETS are still available and are the only modern, up-to-date nets, with dual action impact absorbers.

Specify ATLAS when you want dependable life nets.



ATLAS SAFETY
EQUIPMENT CO., INC.
26 Warren St. New York 7, N.Y.

In Line with
NATIONAL DEFENSE
DAYTON
POWERDRAULIC



Motor-driven with ¾ h.p gear head motor

★ Expands couplings from ¾" to 6" size.

Tests hose up to 700 lbs.

Extra attachment removes old expansion rings from old couplings. No manual effort needed. ★

FOR THE PROPER CARE OF HOSE
MORE PRESSURE - LARGER MOTOR
ROOMIER WORK TABLE
REPLACEMENT SEGMENTS (ALL SIZES)
FOR ANY OLD HYDRAULIC EXPANDER

SEND FOR ILLUSTRATED BULLETIN
DAYTON FIRE EQUIPMENT CO.
1242-48 W. 2ND ST. - DAYTON 7, OHIO

BETTER BADGES

than you ever got before—

For the past 64 years we have supplied the fire fighters of America with the finest badges they have ever worn.

Now—because of the government's prohibition of the use of nickel, brass, copper, nickel plating, and chromium — we are making these badges and insignia in sterling silver, sterling silver gold plated, rolled gold on sterling silver, and 14 karat gold.

Today — for just a little more, you get a sterling silver Braxmar Badge — without doubt the best badge you can buy anywhere.

Recommend Braxmar to all your fellow fire fighters and wear one yourself.

★

The blue covered catalog is the latest published but write for our new price list effective July 29, 1943. Only prices in the catalog on 14 karat gold items are still in effect. All auto plates are discontinued for the duration.

★

C. G. Braxmar Co., 242 W. 55th St., N. Y.
John O. Veit, Pres.

BRAXMAR BADGES

Standard for over 64 years

Manager of Fire Hose Sales Division.

He was formerly Battalion Chief in the Philadelphia Fire Department and was for 20 years a member of the Bureau of Fire. He has long been active in the International Association of Fire Chiefs, Eastern Association of Fire Chiefs, the Pennsylvania State Firemen's Association.

In Philadelphia he set up and organized the Fire Defense Division for the wartime emergency, operating under the office of civilian defense.

Walter Kidde Receives Army-Navy "E"

Walter Kidde & Company, Inc. received the Army-Navy "E" award on April 7. The company manufactures carbon dioxide fire extinguishing equipment as well as inflation units for life rafts, lifebelts and "Mae Wests," pneumatic gun chargers, casings for aerial rockets, cylinders and valves for compressed gases, emergency power actuators for aircraft, and industrial fire fighting systems.

Safety Equipment Catalog Issued

The Stewart R. Browne Manufacturing Company, Inc., of 258 Broadway, New York 7, N. Y., have recently issued a twenty-four page catalog describing the industrial safety equipment which they manufacture. Copies of the bulletin may be secured from the manufacturer.

Bulletin Issued

The Kato Engineering Company, Mankato, Minn., has issued a twelve-page booklet describing their Katolight generators, electric lighting plants, gas driven plants, and rotary convertors, Copies may be obtained from the manufacturer.

Carpenter Manufacturing Co. Moves

The Carpenter Manufacturing Company has moved its offices, showroom and factory to its own new building, the Master-Light Building, Boston 45, Mass.

New Universal Battery Charges

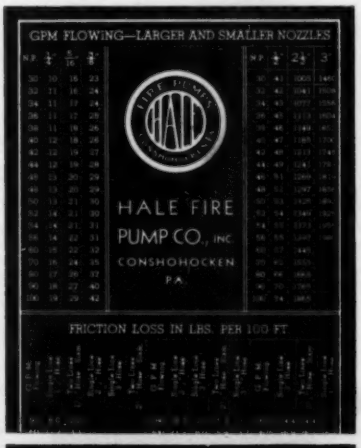
Two new battery charging light plants are announced by the Universal Motor Company: Model 256-GH, 6 volt DC, 250 watts; and Model 312-GH, 12 volt DC, 300 watts. Incorporating the latest features in design and construction, they replace electric light plants of similar sizes as furnished by Universal prior to the war.

Both plants are driven by single cylinder, four cycle, air cooled gasoline engines.

Bulletin Published

The Hall-Scott Motor Company have recently issued a bulletin describing their Series 400 engine and the uses to which it can be put. Also included are the specifications of the engine and an installation drawing. Copies may be obtained from the company's main office at 2850 Seventh Street, Berkeley 2, Cal., or at any of its branch offices.

A USEFUL CARD FOR ALL FIREMEN



The Hale Water-proof Nozzle Pressure Card shown above is pictured half size. Tables tell at a glance the G.P.M. flowing at various Nozzle Pressures and sizes; also Friction Loss in lbs. per 100 ft. of hose.

Please send me, without obligation, a Hale Nozzle Pressure Card.

Name .....
Street .....
City ..... *State* .....
Fire Co. .....

HALE FIRE PUMP COMPANY
Conshohocken, Pa.

Fire Pumps in all standard capacities

WENTWORTH
FIREMAN'S UNIFORM CAPS
Union Made **Prompt Delivery**

No. 342

Wentworth Fireman Caps are made of the Highest Quality Standard Materials available and by the Best Skilled Union Craftsmen in all the New and Standard styles. Our 50 years of experience and skilled workmen guarantee you AMERICA'S GREATEST CAP VALUE in all WENTWORTH FIREMAN CAPS.

No. 441

Write direct for latest circular and prices or see your local dealer.

WENTWORTH-FORMAN CO., INC.
578b Washington St., Boston, Mass.
Manufacturers
Fireman Cap Specialists for Over 50 Years

Save Critical War Material

Fyr-Fyter equipment has proven its value in preventing small fires from becoming disastrous through the loss of life and property. Recent catastrophic fires with terrific loss of life emphasize the urgent need of fire protection. A complete line of UNDERWRITERS LABORATORIES Labeled FIRE EXTINGUISHERS.

HELP SAVE LIVES AND PROPERTY

Get Fyr-Fyters for safety's sake. We advise and serve war production plants, public institutions, etc., immediately. Write us today regarding Fyr-Fyter equipment for your own protection.

THE FRY-FYTER CO.
Dept. 101, Dayton 1, Ohio

Fyr-Fyter

Auxiliary Protection Ends

The dissolution of the Federal Office of Civilian Defense in June 1945 will result in the withdrawal of all liability for injury which heretofore has been carried by the United States Government on auxiliary firemen.

A number of states and municipalities have anticipated this action and have either dissolved their civilian protection bodies or have arranged for appropriate liability protection of auxiliary firemen or other war emergency groups which may be carried on.

In the State of New York, liability in case of accidents or death to auxiliary firemen was withdrawn by the State Office of Civilian Protection on April 30. On May 7, the City of New York announced that the auxiliary fire force of 22,935 members would officially cease to exist on June 30, 1945, and prior to that date, although the auxiliaries were to be permitted in the fire stations, they were banned from riding any apparatus, sliding the poles or participating in any other activities which might result in injury and thus possibly obligate the city.

The action, according to Mayor Fiorella LaGuardia, "is necessary because all liability for injury which was carried by the United States Government, has been withdrawn."

Fire chiefs having auxiliary firemen will do well to review their own situation in the light of the drastic changes in the national, state and local civilian protection setup.

N. E. Conference Cancelled

The War Committee on Conventions has denied a permit to the New England Association of Fire Chiefs to hold its annual conference, scheduled for June 26-28 at the Griswold Hotel, Groton, Conn.

The denial follows one to the International Association of Fire Chiefs, which forced the suspension of this years meeting at Cleveland.

The Cover Picture

The illustration on the front cover of this issue shows Navy fire fighters at work on the deck of the airplane carrier "Franklin," following attack by Japanese bombers. Despite the raging fire, undamaged guns went into action when the Japs loosed a follow-up attack, and succeeded in driving the enemy planes away without sustaining further hits.

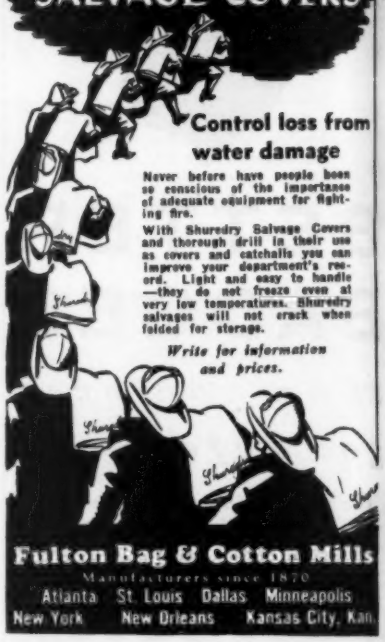
Louisville Installs FM Radio

A complete new FM police radio system has been installed in Louisville, Kentucky, replacing the first police radio which has been in use over 18 years.

This system will serve the city's 60 police cars and 40 miscellaneous vehicles of the fire department as well as FBI, state and county police which are radio equipped.

The new system is greatly superior to the old in which 15 to 20 per cent of the radio coverage was completely dead, and 30 per cent not very dependable for one reason or another. The new FM installation is said to get 100 per cent coverage and to have the additional advantage of being limited in the reception of its messages to only those authorized receiving sets which can tune in on the Louisville police radio calls.

USE Shuredry SALVAGE COVERS



Control loss from water damage

Never before have people been so conscious of the importance of adequate equipment for fighting fire.

With Shuredry Salvage Covers and thorough drill in their use as covers and catchalls you can improve your department's record. Light and easy to handle—they do not freeze even at very low temperatures. Shuredry salvages will not crack when folded for storage.

Write for information and prices.

Fulton Bag & Cotton Mills
Manufacturers since 1870
Atlanta St. Louis Dallas Minneapolis
New York New Orleans Kansas City, Kan.

BOOKS

For the Modern Fire Fighter . . .

Recognized by the Fire Service as Standard

Questions and Answers for Lieutenant and Captain—$2.50

Promotional Study Course for Firemen—$3.00

Fire Chief's Handbook—$4.00

Fire Service Hydraulics—$3.00

(The Above Prices Are All Postpaid)

CASE-SHEPPERD-MANN PUBLISHING CORP.
24 West 40th Street
New York 18, N. Y.

Classified Advertisements

WANTED

Fire Equipment Supply Companies, to sell Morning Pride Protected Rubber Firecoats, with Wing Sleeves, Chest Protector, Face Protecting Collar, Wool Wristlets, Double Shoulders, No Dirt Pockets. Also Firepants and Mitts. Write Morning Pride Mfg. Co., 1986 Home Ave., Dayton 7, Ohio.

CHIMNEY POWDER

No need to send men on the roof for chimney fires. Has-Mor Soot Destroyer not only puts the fire out, it continues to work until it cleans the chimney, making it unnecessary to go back to another chimney fire. Put up in handy packages. Agents wanted. Harry S. Morgan, 52 Broad St., Johnson City, N. Y.

AGENTS WANTED

To sell High Grade line of Fire Protection Equipment and Fire Department Supplies. Good Proposition. Write: SCHWARTZ BROS., Inc., 731-33 Filbert St., Philadelphia 6, Pa.

Established over 37 years.

REPRESENTATIVES WANTED

Several territories open for representatives for the sale of fire apparatus. Write Box 25, c/o FIRE ENGINEERING, 24 West 40th St., New York 18, New York.

FOR SALE

1927 Ahrens Fox, 75-ft. aerial ladder trailer and tractor fire truck with 2 25-ft. ladders, 2 30-ft. ladders, 1-50 ft. extension ladder with tormentors, 1 35-ft. extension ladder, 1 12-ft. roof ladder, 1 16-ft. roof ladder and other equipment. This apparatus is in excellent condition and will give many years of service. For further details write to: C. W. Bosch, Chief Middletown Fire Dept., 126 E. Main St., Middletown, N. Y.

FOR SALE

One Circul-Air fire hose dryer. New, never used. $200.00. Can be seen at the Central Fire Station, Middletown, N. Y., or write to C. W. Bosch, Chief, Middletown Fire Department, 126 E. Main St., Middletown, N. Y.

WANTED

Position with Apparatus, Equipment or Hose concern. Familiar with many types of trucks, pumps and special equipment. Qualified for selling, delivering apparatus, etc. Twenty-four years as City Fire Chief. Three years as Army Fire Chief and Fire Prevention Engineer. Prefer Wisconsin and Michigan. Personally acquainted with many Chiefs in this territory. Address: Box 30, c/o FIRE ENGINEERING, 24 W. 40th St., New York 18, N. Y.

WANTED

A fire truck with booster tank, 350 gallon capacity immediately. Cash waiting. Nation-Wide Fire Prevention and Equipment Company, 126 East 44th Street, New York City. MUrray Hill 2-3795.

Production of Cotton Ruber-lined Fire Hose cannot be stepped up to meet increased military requirements in full in the last half of 1945 unless additional cotton yard and manpower can be made available to the industry, the WPB recently reported.

PORTABLE — **GENERATING PLANT**

Designed to produce the maximum output per pound weight, plant is particularly suitable where portability is a factor.

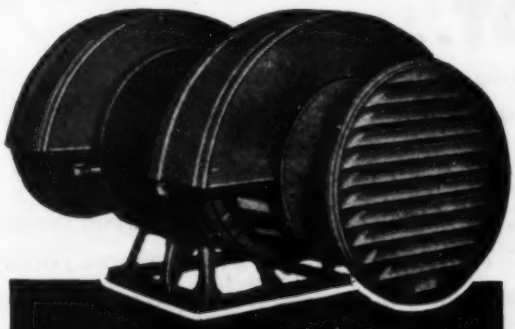
Meets the standards of the aircraft service. Over 100,000 are now in use in the armed forces.

Truly a heavy duty, high capacity, lightweight, sturdy, streamlined, compact and portable plant. Will stand the most severe operating conditions.

A complete line of floodlight projectors, extension cords, live circuit reels and receptacle boxes.

Write now for complete details.

Security **FIRE EQUIPMENT CO.** 1550 PRINCETON AVENUE TRENTON, N. J.



STERLING MODEL "M"

GENERAL ALARM SIREN

You Can Depend On It ALWAYS

An absolutely dependable, tried and proven siren for communities of all sizes. Loud, clear, simple to instal and no maintenance to bother with. Embodying the "know how" of the oldest and largest makers of siren signals in the fire field. Write for descriptive literature and list of towns using the model "M".

ALSO

manufacturers of a complete line of apparatus sirens. Write for literature.

STERLING SIREN FIRE ALARM CO., Inc.
55 Allen Street Rochester, New York

WHEN THINGS GET HOT...

You can count on Elkhart fire-fighting equipment for completely dependable performance. Every Elkhart product does its job quickly and efficiently—at all times and under all conditions.

We build one of the nation's most complete lines of fire-fighting equipment. Backed by Elkhart's 43-year reputation for quality, it is today being proved under fire throughout America and in Allied theaters of war.

MYSTERY NOZZLES
SHUT-OFF NOZZLES
PIPES
COUPLINGS
EXPANDERS
STRAINERS
WRENCHES
SPANNERS
SIAMESE
GATES
VALVES
EXTINGUISHERS
SLIDING POLES
ACCESSORIES

These and other Elkhart products are made in a wide range of styles and combinations.

ELKHART BRASS MFG. CO. Inc.
ELKHART, INDIANA

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JUNE, 1945

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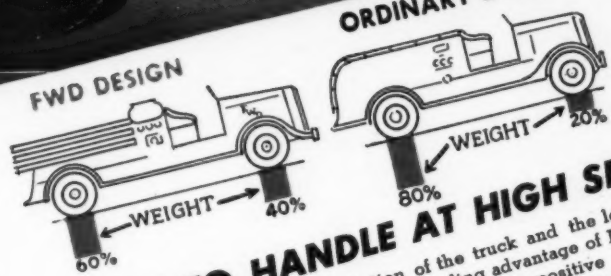
FWD's FIRST
Speed
Safety
Power

EASIER TO HANDLE AT HIGH SPEEDS



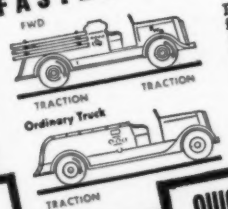
Properly balanced weight distribution of the truck and the load on all four wheels of FWD Fire Trucks, is an outstanding advantage of FWD design and basically balanced construction, which provides positive driver-control at even the highest speeds. In any emergency, FWDs handle perfectly. The weight distribution to front axle is used in powered traction for greater safety and increased performance. Speed, safety and power count in fire fighting apparatus. FWDs have *all three* at their best! WRITE FOR LITERATURE.

THE FOUR WHEEL DRIVE AUTO COMPANY, Clintonville, Wis.

Canadian Factory: KITCHENER, ONTARIO

FWDs Go Where Other Vehicles Fail
NO ROADS TOO TOUGH OR STEEP FOR FWDs

FASTER GET-AWAY



FWD power on all four wheels gets a four-way grip on any road and assures faster get-away.

Other designs, lacking drive on front wheels, lose time in get-away.

NO SKID, NO SLIP, NO SLUE!

Powered steering traction holds front wheels to direction of turns, thus minimizing skid-danger. Skidding tests conducted on ice show 50% less skidding.

FWD... non-skid.

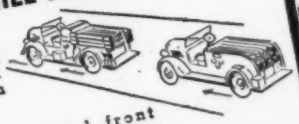
Other designs more liable to skid.

QUICK, POSITIVE, SAFE EMERGENCY STOPS

FWDs have two separate and independent 4-wheel braking systems, with brake drums on each wheel. Combined with properly balanced weight distribution, these provide the most effective braking possible.

GREATER HILL-CLIMBING ABILITY

FWD's front wheel pulling power increases hill-climbing ability. Reserve traction in all 4 wheels.



Non-powered front wheels "block" progress of truck on inclines, reducing steep hill-climbing ability.

FWD

FOUR-WHEEL-DRIVE *Fire Apparatus*

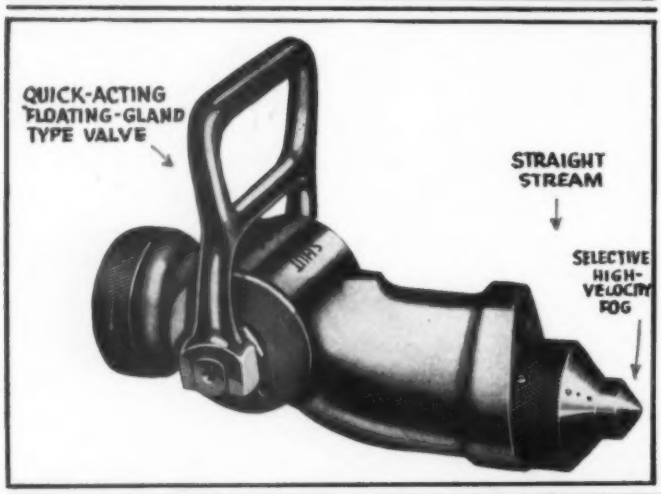
GETS TO FIRES FASTER and SAFER!

Now

SELECTIVE—*HIGH VELOCITY* FOG COMBINED *with the Famous*

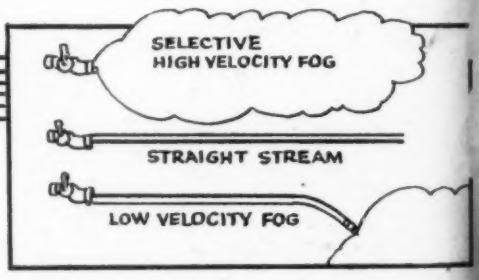
GRISWOLD-ORIGINAL—ALL PURPOSE

FOGNOZL*



This new Series 4NAP Fognozl* marks such a radical improvement in fire fighting efficiency, personnel protection and conservation of water that we offer this new line of equipment with much "pride based upon performance."

The New Series 4NAP FOGNOZL



Finally, after many years of research we have perfected a FOGNOZL*—the new Series 4NAP—which possesses these outstanding features:

1. Adjustable tip for varying quantity of Fog (water delivery).

2. Fog volume easily adjusted under full working pressures.

3. Production of true fog of uniform size of water particles at all adjustments.

4. Solid, homogeneous mass of fog produced at all adjustments.

5. High velocity fog tip is removable allowing instant insertion of Fognozl* Extension Applicator.

6. Highly efficient Fognozl*-designed straight streams included.

7. Shut-off, fog and straight stream are instantly available by means of the famous Fognozl* floating gland rotary valve operated by one valve handle. It is important that you do not have to go through the straight stream to get the fog.

WRITE FOR FURTHER INFORMATION, WITHOUT OBLIGATION.

★ Trademark registered U.S. Pat. Off. All Fognozls* and Fognozl* equipment fully protected by U. S. and foreign patents allowed and pending.

FOG NOZZLE COMPANY

1520 EAST SLAUSON AVENUE — LOS ANGELES 11, CALIF.

FOG NOZZLE OF CANADA, LTD., MONTREAL, CANADA